

Periodical

AMERICAN BEE JOURNAL

June

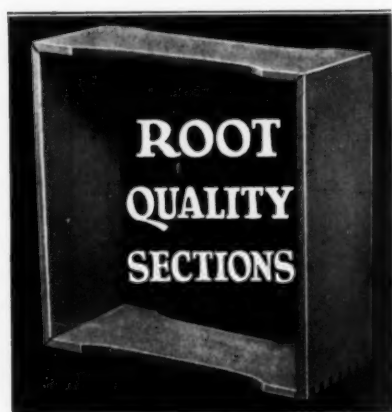


1943

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DETROIT



USED BY MILLIONS



Smooth, white Basswood lumber. Accurately made, exactly right. Fold without breaking. Dovetails correct—Hold tight. Large stock for prompt shipment.

THE A. I. ROOT CO. OF IOWA
COUNCIL BLUFFS, IOWA

LOTZ Quality Sections

The Best Money Can Buy

Featuring

Top Quality Material—Glossy Polish—Smooth Dovetails—Oval V-Grooves—Accurate Dimensions—Fine Workmanship—Reasonable Prices.

Do Not Delay—Order Now

We can still fill your
section orders
promptly

With the ever increasing demand for comb honey, why not produce more, and increase your profits?

Write for our price list for Bee Supplies



August Lotz Company
Boyd, Wisconsin

QUEENS— Italians-Caucasians

Prices on Queens

Lots of —		
1 to	24	\$.75
25 to	99	.70
100 to	499	.65

HOW THINGS ARE GOING

We have just experienced one of the hardest package seasons we have ever had. Bees at our two Mississippi branches were extremely backward this year, due to a cold late spring, with frost well up in April. Then there was such a demand for packages that we were booked before we could really tell just how conditions would be. We have probably turned down more business than we accepted this year, and some people undoubtedly will have to do without bees. We want you to know that we have done our best, and any delay on your order was unavoidable.

We will have plenty of queens after June 10th. We will appreciate your orders and will give you prompt service.

The STOVER APIARIES
MAYHEW, MISS.

After the War

WHAT ABOUT HONEY PRICES?

A Question Every Beekeeper Should Answer

SURE, everything is rosy now. But what will happen when the war ends and people toss their sugar rationing books into the waste basket?

Will honey prices start downward on a long toboggan slide?

The main trouble with the honey business has been the lack of any one packer with sufficient volume to do a real national advertising job. But all this has been changed!

Here Comes Heinz!

H. J. Heinz Co.—makers of the famous 57 Varieties—has now completed its plans for marketing millions of pounds of honey per year. The brand name will be Lake Shore Honey.

Heinz national advertising helped put tomato juice on the map—helped make tomatoes a stable, profitable business for all concerned. *Heinz national advertising will do the same thing for honey.*

Everybody Benefits

Heinz advertising will be educational. It

will point out the many delightful uses of honey. It will tell housewives that honey is a health food—not just a sugar substitute . . . that it is particularly valuable in infant feeding.

Advertising of this type does more than merely sell the brand it features. It creates a demand that will remain constant regardless of what happens to sugar. It will help put a floor under the price of honey and establish the whole industry on a sounder basis.

How You Can Cooperate

To do this kind of a job, Heinz should sell many millions of pounds of honey this year.

If you agree that the entrance of Heinz into the honey business is a good thing for everybody, then we suggest that you consider selling us part of your coming crop. Mailing the coupon below does not obligate you in any way. It is simply the first step in making a contact which will, we hope, be profitable to all concerned.

**H. J. HEINZ
COMPANY**
PITTSBURGH, PA.



—CLIP AND MAIL THIS COUPON TODAY!—

H. J. Heinz Company, Dept. AB-6, Pittsburgh, Pa.

I expect to produce _____ lbs. of honey in 1943. It will
be ready about _____

Name _____

City _____

State _____

Sending in this coupon does not obligate me in any way.

EDITORIAL

MORE PERMANENT MEADOWS NEEDED

MIDWESTERN agriculture greatly needs more permanent meadows and pastures. We hear much of the famous English pastures which have been used continuously for many decades. They are even said to improve from year to year.

Most of our meadows and pastures are based on short lived legumes. Both red clover and sweet clover go out in two or three years and the farmer plows up the meadow and plants corn. Bluegrass and white Dutch clover are the base of most of the pastures and the white clover is also a biennial. Bluegrass dries up in mid-summer when badly needed.

A lifetime meadow and a similar pasture would add greatly to the stability of the farm community. Alfalfa of late is commonly planted for a hay crop but although it lasts longer than the clovers it seldom stands for more than five or six years.

The recent dry seasons brought brome grass to public attention since it stands more dry weather and lasts for a longer time. A plot of brome planted by our field editor in 1908 still offers a perfect stand after 35 years, but lacks a legume for balance. A lifetime meadow with a legume which would provide good bee pasture would remove much of the present uncertainty for both farmer and beekeeper. In our honey plant gardens we are searching for such a legume to balance the brome. The bird's-foot trefoil, the Wagner pea, and the cow vetch all offer possibilities but are, as yet, not tested for such a combination.

The past winter was a severe test for many plants and dozens of legumes in the test plots were winter killed. There are widespread reports of winter killing of alfalfa and the clovers in this area. Until recently there has been little inclination to search for new and better forage crops but we have gone on planting the same ones which our fathers used.

— v —

FORETELLING THE HONEYFLOW

A western reader inquired of the editor what factors control nectar secretion and what one must observe in order to anticipate the time when the flow will start, how long it will last, whether

it will be heavy or light and steady or intermittent.

If one had this information his advice could well be worth millions to the beekeeping industry. If we could tell in advance when the flow would fail we could move the bees to a place where the flow would be heavy.

The honeyflow, like other natural phenomena, is controlled by natural laws. The time will come, in all probability, when men will understand the working of these laws. Until then we work very much in the dark with only a faint understanding of the influence of such things as temperature and humidity. The man who unlocks the secrets of nature deserves special consideration of his fellows who profit by his efforts.

— v —

WHAT OF THE FUTURE

THE beekeeping industry may be facing a crisis in the near future. The trend of the time for years past has been to develop large outfits which have produced honey at a cost too low to permit the small producer to continue. The net result has been a decline in honey production in the United States as a whole, while there was a great increase in the regions suited to large operations. Harold Clay, of the United States Department of Agriculture, called this fact to public attention at the Detroit convention eight years ago.

A large portion of the thousand-colony outfits are located in the sweet clover districts and depend upon that crop almost exclusively. With sweet clover threatened, the question at once arises as to what will be left for the industry should sweet clover fail. It is hardly probable that sweet clover pasture will disappear, but the weevil may reduce the crop to such an extent as to make smaller outfits necessary.

The beekeepers have missed the boat by failing to tie in with the food production program and use the war emergency as a means to gaining the interest and enthusiasm of new recruits. The extension program in beekeeping that developed with the first World War did more to revive the honey producing industry and improve its methods than anything that has happened in many years.

The future prosperity of our industry depends much upon the foresight of our present day leaders.

THE FUTURE OF BEEKEEPING

MANY are showing an interest in honey production now that prices are on a more satisfactory basis. To those who inquire as to the opportunity which beekeeping offers we would quote the statement of C. P. Dadant in 1934, a few years before his death:

"For seventy years I have been engaged in beekeeping in Illinois. During that time there have been many ups and downs. There have been booms and depressions, high prices and low prices but always the bees have done well by me. They have paid for my home and business, educated my children and given me a fair share of the comforts of life. I have seen many go into the business of beekeeping only to lose interest and get out again in a brief time. I have seen others who have stuck to the bees and always the bees have done well by such men.

"I still believe in honey production as a worthy calling and feel that never has it been more promising than now. If I were a young man ready to start over again I can think of nothing which would be more attractive to me as a way of life and a means of livelihood than beekeeping.

"After a long life spent with the bees I want to pay a tribute to the busy insects whose labor insures the fruitfulness of so many plants, while providing at the same time for them and for their owner as well. The product of the apiary is of the highest quality—the standard by which all that is pure, sweet and wholesome is measured. The one who lives by the labor of the bees adds to the wealth of his fellows as well as his own. I am proud of my calling and proud of the fact that my children and grandchildren are likewise content to be known as beekeepers."

— v —

THE TOP ENTRANCE

IT has taken the beekeeping industry a long time to accept the advice of Langstroth to use an upper entrance for winter. In the 1859 edition of his book he described the winter entrance at the top of the hive. As has been true of most of his recommendations, time has proved him to be right.

From far and near come reports of successful wintering of bees out of doors when the upper entrance is used. Success has come by this means far to the north of regions formerly thought to be safe for outside wintering.

One who has opened a hive after a spell of severe weather and seen the heavy deposit of ice surrounding the cluster as a result of condensation of moisture will not be surprised that results are better with the top entrance which permits its escape.

C. L. Farrar has said "no amount of packing can correct improper conditions within the hive." He is right. A strong colony of bees with ample stores will stand long periods of severe cold if the hive remains dry. Condensation of moisture, rather than cold appears to be the cause of much of the winter loss. Upper entrances do much to prevent such condensation and had the beekeepers listened to Langstroth uncounted thousands of colonies of bees might have been saved.

The late W. J. Sheppard, of British Columbia, wrote much about top and middle entrances at a time when the industry had little faith in either. In view of the heavy winter losses over a long period of years it is surprising that more attention has not been paid to such reports.

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THE ENTRANCE INDICATOR

A Swedish beekeeper, Alexander Lundgren, wrote, "The entrance of the hive is the mirror of the colony." This is a quotation that deserves to be more widely quoted. How true it is that the experienced beekeeper can tell much concerning conditions within the hive by close observation of activities at the entrance. One who is well acquainted with bee behavior will quickly note that something is wrong or that all is well depending upon the actions of the bees at the entrance of the hive.

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HONEY

THE Hon. Lloyd George, former Prime Minister of Great Britain, was as prominent during the first World War as Churchill is now. George is an ardent advocate of the use of honey and his description of that product is worthy of repetition. He says: "Honey is an appetizing, nourishing, warming and healing food. It is the natural sweet. It contains the vitality that comes from kindling and energizing rays of the sun."

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COWS IN THE GARDEN—So said Dr. C. C. Miller about swarms. It's hard to get over the excitement of the swarm, however, and many a small beekeeper still thrills to it.



Let Your Beeswax Ride to the Battlefront

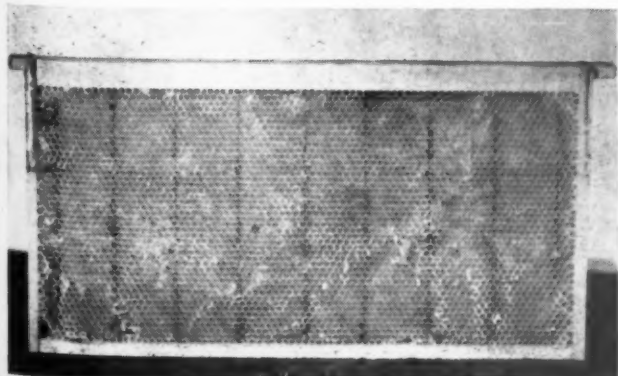
MRS. DAVID PILE, Corvallis, Montana



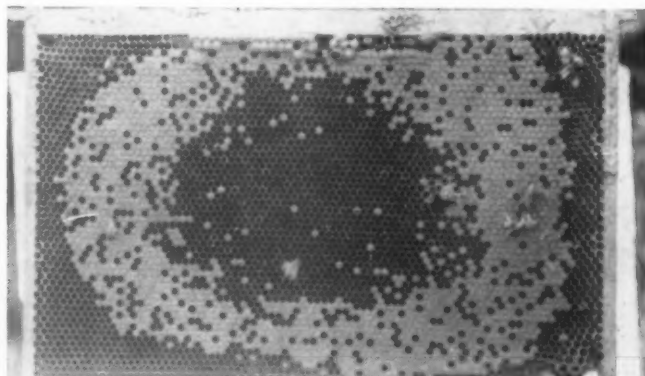
The typical war machine may contain as much as ten pounds of wax in resistants for wiring and coils, in protectors for shells and cartridges; it is in medicines, in waterproofings, in other vital materials. So whether you trade your beeswax for supplies, for foundation, or sell it for cash, you are doing your bit.

Don't burn or throw away your slumgum. Send it to us for testing. Dry it; ship by freight, collect, in double gunny sacks, billed as "beeswax refuse." We will get the wax out of it, deduct the cost of freight and rendering, and you may trade or cash the balance. On shipments of a hundred pounds or more, if we do not get enough wax to make it pay, we will cover all the costs ourselves and it will not cost you anything. Remember, beeswax is a vital material and if you stay in beekeeping your future supplies of beeswax products will depend on how much you do now to keep the domestic beeswax volume as great as possible.

DADANT & SONS : Hamilton, Illinois



Turn your wax into Dadant's Crimp-Wired Foundation. It will give you combs like this, of all worker cells built from corner to corner.



Your brood combs will turn out pounds of worker bees to make you big colonies, or pour surplus honey into your extractor year after year.

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WILD CHERRY—Paul Hadley again. As this goes to press, the wild cherry is in such full bloom as we have not seen for years—and weather so foul that bees cannot reach the blossoms.



PACKAGE BEES AND QUEENS

QUALITY BEES
AND SERVICE

GARON BEE COMPANY

Progeny-Test Three-Banded Italians

DAUGHTERS OF STOCK BRED FOR
RESISTANCE TO A. F. B.

	Queens	2-Lb.	3-Lb.	4-Lb.
1 to 24	\$.75	\$2.80	\$3.65	\$4.45
25 to 99	.70	2.65	3.45	4.20
100 to 499	.65	2.50	3.25	3.95

No disappointed customer once the order is accepted.

Donaldsonville, La.

Telephone 8614, Telegrams, Western Union

Attention!

We have completely booked our supply of Package Bees and Queens for delivery in April and May.

We thank those of you who have placed your orders early. To those that we could not accept your order, we are extremely sorry. We had rather return your order than promise that which we cannot do.

NO CHANGE IN PRICE FOR JUNE

ROSSMAN & LONG

Box 133

Moultrie, Ga.



For
Better
Beekeeping

DADANT'S FOUNDATION

Quality Surplus For Comb and Bulk Honey

Plain Foundation

Crimp-wired Foundation

Dadant & Sons

Hamilton, Illinois



KELLEY—"The Bee Man"

ITALIAN QUEENS


1 to 24	-	-	-	75c	postpaid
25 to 99	-	-	-	70c	" "
100 up	-	-	-	65c	" "

Queens shipped daily from Paducah.
Wax accepted in trade.

WALTER T. KELLEY CO. : Paducah, Kentucky

Now we can say—

A "freeze" order on lumber suitable for beehives, L-290, was issued by the W.P.B. May 6, after this copy was sent to the printer. Unless this freeze is relaxed for bee supplies they may be scarce.

UMBER is again coming to us in good quantity, and if it continues as we hope, there should be no serious delay in shipping most items of wooden goods in June. Stocks of foundation are ample and we can make prompt shipment. Excluders, 10-frame and Modified Dadant size ready in June.

Many have been disappointed that we could not get material to fill orders for wooden goods earlier in the year. To these we can only say war requirements took lumber we otherwise would have had. It takes a while to get good stock accumulated again, as the bee supply manufacturers run 12 months in the year to make up enough stock for prompt shipments going out in about four months of the year.

There are still many items of miscellaneous goods we will not be able to get due to wartime restrictions. However, most of the items needed to produce honey are available in reasonable quantity. We will have no extractors this year, (but hope to have a supply of excluders ready for June shipment). Send us your beeswax for cash or trade, as we pay ceiling prices, and much of your wax is needed by the armed services.

G. B. LEWIS COMPANY : : : Watertown, Wisconsin

BRANCHES: COLONIE & MONTGOMERY STS., ALBANY, N. Y., 1117 JEFFERSON ST., LYNCHBURG, VIRGINIA;
118 SO. LIMESTONE ST., SPRINGFIELD, OHIO; 214 PEARL ST., SIOUX CITY, IOWA

SEND YOUR ORDER TO OUR OFFICE NEAREST TO YOU



WASHINGTON CONCERNED ABOUT BEESWAX

Government officials in Washington are concerned about whether there will be sufficient beeswax to supply the demands of the Army, Navy, Air Force and essential industry. Army and Navy officials have been concerned to the extent that they have attended meetings of the Importer's Industry Advisory Committee. War Production Board has been concerned to the extent that a limitation order on uses of beeswax has been under consideration for a long time. The Salvage Division of W.P.B. is giving consideration to adding beeswax to its growing list of items. The Department of Agriculture and the Farm Machinery and Equipment Division, W.P.B., has been concerned largely because of the recognized part beekeeping will play in the pollination of forage and food crops needed in the increased food production program, but also because of the scarcity of beeswax.

The concern of government officials also is reflected in repeated talk of the need for a "stock pile" of beeswax in case of national emergency. While there seems to be lack of official authority for the statement that in case of gas warfare large quantities of beeswax will be required immediately, there has been enough smoke to indicate that somewhere there is fire. Figures of 400,000 pounds, 500,000 pounds and 600,000 pounds of beeswax have been mentioned. This "stock pile," furthermore, will be dependent on domestic sources due to the limited amount of beeswax which is being imported and the uncertainty of the shipping situation. Those who have been to Washington have been asked about available stocks in the hands of manufacturers, dealers and beekeepers. The replies have been similar and all show that the domestic market at the



present time is short of supplies of beeswax.

It has been pointed out that the real "stock pile" is in the hands of United States beekeepers. U.S.D.A. figures showed 5,022,000 colonies of bees in 1942 which is estimated could produce approximately 35,000,000 pounds of beeswax. To take all of this would ruin the beekeeping industry. The importance of the honeybee in the pollination of food crops is too great for any such thing to happen. The collection of beeswax from all of these colonies is not a feasible thing. While it appears unlikely at this time, it is not beyond one's conception, in case of national emergency, that it would be necessary to collect a fixed amount of beeswax per colony. Should a national emergency, arise, the beekeepers of this country will certainly stand ready and willing to do this.

Increased production of beeswax, the saving of all the beeswax produced by bees, and the elimination of any waste in the care or use of beeswax to insure a maximum amount of beeswax being placed on the market where it will become available to the requirements of the war effort and essential industry is the task of every beekeeper in this country today. This increased amount placed on the market, along with what importations of beeswax are possible, can, in our opinion, take care of requirements this year. War Production Board has recognized this situation and has set up an import quota of 3,000 tons. Licenses to import over 2,000 tons of beeswax have been issued against this quota but the amount that will be imported is still a doubtful figure.

Two stumbling blocks are in the path of importers of beeswax. One of these is the O.P.A. Industrial Wax Ceiling Order which placed ceiling on imported beeswax at a figure that makes it difficult for importers in this country to buy abroad. The other is the shipping situation which is not improved as far as shipments of beeswax are concerned. However, there

are reports that beeswax is coming to this country in larger quantities than in past months, particularly from Central American and West Indian sources. Brazilian beeswax is beginning to come, but it is stated that many of the ships coming from South America do not go into Brazilian ports from which beeswax was formerly exported.

With the import situation an uncertainty, particularly to land lubbers like ourselves, the increased concern of government officials over the present supply of beeswax and increased regard being shown the domestic beeswax market by them, it is up to all of us to produce and save as much beeswax as we can and get it to the market as soon as practicable. Dr. Eckert of California has proposed a goal of three pounds per colony. We think this is a possible goal and are astonished with the realization that, if this were accomplished, it would triple the amount of beeswax ordinarily placed on the market.

Culling poor combs is an important source of additional beeswax. These combs which we leave in our colonies from year to year through neglect and carelessness are a detriment to good beekeeping. As a beekeeper, I think I know what I am talking about when I say there are at least one or two combs per colony that should wisely be culled. Replacing them with full sheets of foundation results in putting on the market twice as much beeswax as you use in replacing the combs. Two combs culled per colony would net the need for beeswax $\frac{1}{4}$ pound per colony.

It is generally too late for much spring culling of combs, but this can be done effectively later. Poor combs can be worked to the outside of the brood nest and removed later when the bees have more or less cleaned them of honey and deserted them. Perhaps a better plan is to concentrate culled combs in one, two or more bodies above an inner cover with the escape hole open. In good weather, not too warm, this can be



done whether the combs contain brood or not. The brood will hatch and the young bees as well as the bees which accompany the combs will gradually unite with the colony below. Be sure these bodies are tight to prevent robbing and if you are troubled with disease, do not use this method for you are exposing the colony over which the several bodies are placed to the possibility of disease from any one of these combs. Bodies of foundation should be drawn over the brood nest during flow to get good combs to replace poor ones or frames containing full sheets of foundation can be used to replace the poor combs as they are removed. Foundation used in this manner should be placed between the first brood comb and the last store comb toward the side of the body.

Other methods of increasing the amount of beeswax placed on the market are as follows: Careful saving of all scraps and frame scrapings can amount to as much as half-pound per colony. Wider spacing of super combs by using one or two less frames per super and the cutting of deep cappings can result in a yield of as much as 50 per cent more capping wax. Saving refuse and slumgum more than half of which is thrown away or burned. Send a minimum freight shipment to your nearest rendering center or if you do not have enough to make a minimum freight shipment, send it along with some of your neighbor's. Save wax by preventing comb damage by bee moth. This is our greatest source of wax loss or waste in the South. Tell your neighbor beekeepers about the need for beeswax. It is estimated that 25 per cent of beekeepers never market a pound of beeswax.

The possible result is that more than a million pounds of beeswax can be added to the total amount placed on the market this year. This can only be accomplished by each of us doing our share, our specific bit in this great task, our patriotic duty. This is the reason for more beeswax. And it will be a fine way of adding to your income, of being a better beekeeper, and, incidentally, of showing your own appreciation for unlimited 60 pound tin containers, glass containers and beehives, and for beekeeping being considered an essential industry, and for the many other considerations extended you by your government today.

— V —

EXPORT REGULATIONS REVISED

On January 27, 1943, the Chief of the Office of Exports issued a general revision to the regulations governing

the export of many commodities, including honey and bee supplies. The revision includes regulations governing exports and outlines procedures for the issuance of licenses. The regulation also specifically prohibits the export of many commodities to destinations other than the Dominion of Canada. Among the commodities prohibited for export are honey, beekeeping supplies, including beehives, comb foundation, honey extractors, etc. (Beekeeping News Letter from Ohio.)

— V —

PACKING HONEY UNDER MAXIMUM PRICE REGULATION

Under the f. o. b. maximum prices established for bulk honey, beekeeper-producers and distributors must load the honey into carriers in tin containers and, where necessary, shipping cases to protect those containers, the Office of Price Administration ruled today.

The ruling was issued to clear up confusion which had arisen in the trade under Maximum Price Regulation No. 275 (Extracted Honey).

It was explained further that, if the buyer furnishes the tin container but not the shipping case or carton, the price shall be reduced one-half cent a pound. Where the buyer also furnishes the shipping case or carton, the price of the honey must be reduced to the extent of the value of the case or carton.

The maximum price of bulk honey, U. S. Grade No. 1 or better, is 12 cents a pound f. o. b. seller's shipping point. (OPA).

— V —

IMPORTANCE OF FARM TRUCKS

The vital importance of the farm truck has been obscured by the seriousness of farm manpower and machinery problems, according to K. B. Elliott, Vice-President of the Studebaker Corporation.

"The country has not fully recognized that it will be difficult to accomplish the desired farm production this year if enough truck equipment is not available. Success of the food campaign involves transporting and moving foodstuffs and the hauling of livestock and all kinds of supplies and equipment."

Studebaker dealers have available for farmers a booklet which contains data on the care and operation of farm trucks which any farm owner may obtain free of charge."

TIRE RETREADING, RECAPPING AND REPAIRS

According to the May 10 War Letter from the United States Department of Agriculture, all controls over the distribution of used tire retreading, recapping and repair equipment have been lifted by the Office of Rubber Director. The production and acquisition of new tire retreading, recapping and repair equipment having a retail value of \$85 or less is now permitted. The original order permitted production and acquisition of tube repair or spot equipment having a retail value of \$100 or less.

— V —

RECAPS FOR FARM TRUCKS

A greater number of recaps for farm trucks will be available as a result of an OPA action which removed quota restrictions on the number of certificates for truck recapping effective May 1. OPA also withdrew the present rule that certificates for recappings and inner tubes can be issued for List B trucks only after the twenty-fifth of the month. Most trucks on the farm are in List B.

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PARTS FOR TRUCKS

Contrary to general opinion, owners of trucks do not need a preference rating to buy a replacement part. If the needed part is not available locally, a purchase order may be placed with any dealer.

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IOWA APIARIST REPORT

The Iowa State Apiarist report for 1942 is now ready for distribution. It is a book of 110 pages most of which is devoted to a "Manual for Beginners." This is the second time that the report has been used as a book of instruction rather than as a medium for reporting the papers from the annual convention. The demand for information is so heavy at present that a large portion of the issue will be shortly distributed. This book is free and those wishing copies should write at once to F. B. Paddock, State Apiarist, Ames, Iowa.

The publication is well illustrated and will serve a very useful purpose for the novice with bees. It is rare that a book of this extent is issued for general distribution.

FEATURES



BLACK LOCUST—Not black at all, but the most beautiful, creamy white imaginable; and do the bees love it! Where plentiful, the surplus honey is one of those rare products that deserves considerable attention.

JUNE, 1943

TWO-QUEEN SYSTEM

By H. A. SCHAEFER

THE development and use of the two-queen system as used in my apiaries began in 1928, to reproduce as nearly as possible the colony conditions of two colonies that produced over 400 pounds of surplus honey each the year before. These figures are actual weights as taken from the record. Colony No. 31 produced 408 pounds, was cellar wintered, the other, No. 62 produced 405 pounds, was wintered out of doors in a four-colony wintering case, as recommended by Dr. Phillips with the U. S. D. A. at that time.

Colony No. 31 had only 1½ frames of brood while No. 62 had 4 at the first examination early in April, 1927. No. 31 was given 2 frames of brood from a strong colony at that time. No. 62 was not helped. Both had old queens. On May 1st, both were queenless, and had cells. Each one was given 2 frames of bees and brood as they were still weak, or seemed to be getting weaker. The third week in May the young queens were laying in a brood nest where had accumulated the nectar and pollen of a good dandelion flow.

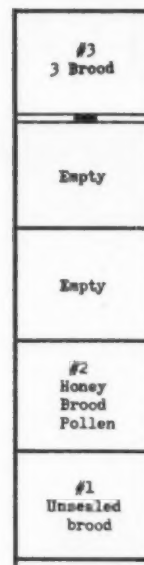
On June 10th, when we started Demareeing, which was my swarm control system at that time, all colonies were practically of equal strength as all were previously equalized by exchanging brood. I had no A.F.B. so that could be done. Colonies No. 31 and 62 were not Demareed but each had the queen excluder put above the lower brood nest hive body, with plenty of supers above the excluder. Later, July 2, when these two colonies had more honey and more supers on than any other hive in the yards, this question arose, "Why should these two be so much better than the others?" Upon examination and comparison, it was found that these two queens were the only queens that had brood in all ten frames of the single story standard 10 frame hive body. There was not a bit of honey in either brood nest, instead, all frames were filled with brood and pollen from top bar to the bottom bar even brood on the outside of the frames next to the hive body sides. Also, Nos. 31 and 62 had made no attempt to swarm. During the next winter then, a study of the record was made in an attempt to solve the "Why" part of the problem, and, if possible to evolve a method of manipulation whereby all colonies could be made to be like the best in the yard and yield large returns.

However, the proposition was easier to figure and construct on paper than it was to apply in the yards. Theory was one thing, practise another. My greatest trouble was in getting the young queens safely introduced, after they were successfully mated and laying above the inner cover of the hive they were to head later. Mr. Jay Smith, at that time, had an article published in *Gleanings*, explaining how to mate queens directly above the brood nest by the use of a screen. That was the answer to that part of my problem. For the best results in swarm prevention, the young queens should be mated on the same hive they are to head, but because of the time factor it is almost impossible to raise all the queens needed, then queens from the South are used. However, some colonies will swarm, that have had outside queens introduced.

We use the method this way. As early in the spring as is practical, here it is the 1st of May, we start our queen cells. Seven days later all hives to be supplied from that batch of cells are each worked in this manner: the old queen (last year's) is found and clipped, the combs are sorted three ways, for honey and pollen, sealed brood and unsealed brood; the colony is then rebuilt by placing the old queen with all the unsealed brood and two frames or more of honey and pollen in the lower brood body, a second brood chamber of combs, several filled with honey and pollen, is placed above the first, then two shallow, 6", extracting supers with combs are placed above the second hive body, the screen next with the entrance up and to the front, above the screen is placed the hive body with not less than three frames of sealed brood and adhering bees, and one frame of honey. Two days later the ripe cells are given to all the top divisions prepared, the cells being pressed near the top bar into the comb that is nearest the center of the cluster and sprinkled with sugar syrup to introduce the cell. In the case of shipped-in queens, we introduce them at the time of making the division. In our Dadant hive yards, we use the shallow super food chamber for the top division to mate the queen, as we can exchange no combs. We shake the bees from at least three large combs of the brood nest, trying to get mostly young bees into the shallow super, and this works out very good. The new queens are united with the



No. 1



No. 2

lower brood nest about twenty-five days before the average closing date of the honeyflow, by taking out the screen and substituting a sheet of newspaper. Mr. Paul Johnson, of Callaway, Minnesota, puts the new queen's brood hive body down directly on the lower queen's hive body at the time of taking out the screens, while we place the hive body of brood and the young queen, if she is still in that body (we do not look), down on the lower brood body on our next trip to the yard. In a real good honeyflow we leave the top brood body up until we start taking supers for extracting, a good flow will force the young queen down. Supers are given before they are needed under the screen, and when needed above the screen. The advantages for me in using this system of management over the other methods tried are: 1. We increase our honey production because, (a) We improve our stock, not only by using a proved production queen as breeder, but also because our drones are somewhat selected also, as only the best and strongest colonies in the yard have drones so early in the season. (b) By allowing the bees themselves to kill the second queen. They will kill the poorest of the two, nine times out of ten and that is a better average than we could reach. Time and again we have found both the clipped and unclipped queen laying on the same comb the next spring, and no supersedure cells to be found. Odd, but true! (c) The best hive condition for no swarming is in a colony whose queen has been superseded before the honeyflow. This system brings about the same colony conditions, there is no break in egg laying, even both queens lay for a month or more, building an enormous colony population. The

earlier the young queen can be mated provided the parent colony is strong enough for division, the greater the population for the honeyflow. (d) A young queen to build up the colony population before the flow is much more vigorous than an old queen.

2. (a) Our time consuming manipulations, as finding the queens and clipping them, sorting the brood, etc., is done before the honeyflow. After the honeyflow starts we have no time for these manipulations, we are kept busy putting on supers. We do not open the brood nest nor see the queens again after having found and clipped the old queen, unless the normal hive condition is upset in some manner, then we try to find the cause and remedy the same. (b) We find that to requeen in the spring is much simpler and faster than requeening in the fall after the honeyflow. In the spring the queen is easy to find as the population is not so large as in the fall, also after the honeyflow the enormous colonies are ugly tempered when opened. Again, these large colonies have many heavy supers to lift around. We could not requeen in the fall if we wanted to.

The disadvantages are: 1. This work must be done early in the season on schedule time. In a large outfit dovetailing the dates of the different operations for the different yards, cell hatching dates, etc., calls for a study of the calendar and the making of a schedule. Should bad weather upset your schedule you must have queens from the South handy to take the place of the cells that hatched before you could place them. 2. Should this work be done **too late**, then the colony will have **all bees and brood** at the end of the honeyflow, instead of a **hive full of honey** and a small brood nest. That has happened to me and others. 3. Only colonies that are strong should be used. If medium or weak colonies are used, the division will retard instead of increase the colony strength. We have placed 2 pound packages above weak colonies with good results. 4. Because of the two queens, the colony's strength is so great there is apt to be a shortage of honey for winter stores in the brood nests, as most of the honey is crowded out of the brood nests into the supers by the large amount of brood. Care must be taken to leave enough honey for winter stores and to carry the colony into the next honeyflow. We leave all the deep supers on the hives until the end of honeyflow, then giving the colonies their winter requirements before taking the last of the supers in for extracting, and then we still save extra full supers, for feeding later when all colonies are weighed. 5. Standard 10 frame hives get so

high as to be unhandy to handle the supers of honey for an average crop. The Dadant hive is better in this respect. A word about our hive unit. Our 10 frame standard hive consists of, the bottom board, three deep bodies for brood nests in summer and for winter stores, five Dadant depth shallow supers (6 5/8"), inner cover and metal cover and a screen made to fit the hive the same as the inner cover, with a 1 1/2" entrance cut on one end. This screen is simply made of hardware cloth placed between two strips of lath, the lath overlapping at the corners for strength. Our Dadant units consist of the bottom board and deep brood body, one shallow super for mating the second queen and **for winter stores**, six shallow supers, inner cover, metal cover and a screen to fit.

Beemen who have not seen a strong two-queen colony have really no idea how strong a strong colony can be. I have had my eyes opened. My neighbor beemen marveled, until they tried the two-queen system, at my strong colonies, why they were hanging out during the flow and still not swarming. (Strong colonies hang out in the afternoons for us even when they have plenty of room).

Summary

This two-queen system improves our stock by selective breeding and mating, when we raise our own queens.

This two-queen system gives us greater returns than any other method tried.

This two-queen system dispels for us the strong colony's instinct to swarm and directs this energy to the brooding and storing instinct, keeping this on the up grade until the danger of swarming is past, with the least possible time and energy spent on our part.

To me a hive of bees is like a train on the track. The hive management decides the type of train, freight, passenger or stream-liner. The side tracks are the numerous colony strength and morale disruptions as swarming, drone layers, disease, etc. The station along the tracks are the colony honey yields. It follows then that by keeping the stream-liner on the main-track it will travel the farthest in a given time, gathering the most honey. This two-queen system is my stream-liner now, ten years hence there may be a better plan. Who knows?

Wisconsin.

— V —

CROSSING THE POLLEN

Having bees in the vicinity of my garden, I decided to see what results I could get from cross pollination.

Early in the spring I planted white bush summer squash (white patty pan) near a patch of sweet corn. In the sweltering hot sun, these plants were assiduously cultivated to induce the production of a vegetable of quality. However, as they developed, it was noticed that the fruit instead of being of conventional shape and color, white-skinned with scalloped edges, they assumed all sorts of queer shapes and various colors. By harvest time, they were a sad sight from a practical standpoint, but highly interesting for



their beauty of color and oddity in shapes, no two of which were alike. Some of the fruit conformed to the regulation shape, but the coloring was of a brilliant green on white. Others were curiously shaped, with ruffled or warted surfaces and colorings of pink, orange or brown, solid or striped.

Alvord L. Bishop,
Ohio.

RESULTS COUNT

By CHARLES MRAZ

IN spring a beekeeper turns to reading the bees and queen ads in the bee journals. Since almost everyone who wants to start beekeeping or is already a beekeeper, buys bees, queens or both, the success of the beekeeper depends greatly on the quality of queens he buys. At present it seems buying queens is like picking names in a grab bag. Until one has picked out the best of the queen breeders over a period of years by the trial and error method, a beekeeper can never know what to expect from queens until a year later, when the total results of a queen's value can be tallied.

In looking over the ads this spring we find usually two qualifications stressed by almost all of the queen breeders; prompt service and three banded Italians. In many cases the queen breeder will just advertise Italian bees and queens. No one can find argument about prompt service, but why stress "Three Banded" Italians? It apparently is the result of a crazy idea that to be pure Italians, bees must have three yellow bands. Anyone who has ever seen real Italian bees knows that this is not true. Pure Italian bees sometimes have bands and sometimes have no bands at all. Their abdomens at times may appear so dark as to look entirely black.

After buying queens for the past 20 years, I come to one conclusion; that some queen breeders do not seem to realize many of their customers are in the bee business to make honey. While many beekeepers still buy queens entirely on looks, the successful honey producer does not care if his bees have three bands, 5 bands or no bands at all. What the successful honey producer wants is **results**;—honey in the cans at the end of a honeyflow and a good, well-wintered hive of bees in spring.

Too often queen breeders use as breeding stock queens that show only good looks or gentleness. Too often, such essential qualifications as high honey production, hardiness, non-swarming and good wintering are entirely overlooked. The reasons for this is simple enough. Good breeding stock is difficult to get and too often beekeepers themselves overlook these essential qualifications in queens they buy, too often putting the blame of small crop or poor wintering on the weather instead of on the queens where it often really belongs.

How many queen breeders sell

queens from stock that they know to be raised and mated from breeders that will pull through a New England winter without a flight for five months? Bees that conserve their stores in late summer so they won't starve to death before winter sets in? Bees that will pile in a season's honey crop in five weeks and not waste that time in useless swarming? Bees that show hardiness and vigor to work in cool spring weather without dwindling? Bees that show reasonable resistance to disease? It seems to me the number of queen breeders raising such queens are a very small minority indeed and any breeder that does raise such stock, should certainly advertise that fact. It will save honey producers years of searching and lots of money.

From my experience most Italian queens from the South show following weaknesses here in the north. They show poor wintering as a rule. Not only that they do not seem to withstand long confinement, but in late summer when no honey is coming in, they continue to raise useless brood until they silently starve to death. The better type of Italians will conserve their stores and energy, going into winter with a full hive without much need of feeding. A majority of commercially sold queens are poor honey gatherers here in the North. Some of them appear to be just plain lazy, they lack the ambition or vitality to roll in the honey while the getting is good. Some of them do not build up well in spring and queens seem to wear out rather quickly. And lastly, though I'll be cussed for saying it, they are more susceptible to disease especially A. F. B. and some times paralysis.

What can the queen breeders do about it? There isn't much they can do. After all, a queen breeder has neither time nor conditions to select the breeding stock that the northern conditions require. It is a job a queen breeder cannot do alone, but can be done only by cooperation with the honey producer. By cooperation I mean it is up to the honey producer to supply the queen breeder with breeders of the strain of bees he desires; queens that he knows winter well and produce big crops under his conditions, not under southern conditions. Every beekeeper no matter how big or small, will find queens in his yard that are outstanding, queens that produce big crops without swarming that go through five months confinement and weeks of sub-zero

weather without loss. As like begets like, if honey producers want more of such queens, they have to be raised from such queens. The honey producer is the only one who has such queens and it is up to him to see that the queen breeder gets them. Only by constant selection and reproduction of the best can a beekeeper expect to get the best.

Such a system is already being practiced by some successful honey producers and should be practiced by many more. There is plenty of "Human Inertia" to overcome and will take time, but this spring if you find a heavy winter loss, or this summer you find empty supers when they should be full, don't put too much blame on a "hard winter" or on a poor honeyflow. In too many cases you bought queens that took your eye but missed the honey crop or looked a bargain but died in winter. Find a reliable queen breeder, supply him with good breeding stock and you will find yourself making lots more honey with lots less work and overhead.

Vermont.

— V —

BUYERS ACTIVE

Everywhere buyers are out after honey. If there were no ceiling on honey, its price would go up like a skyrocket and this very skyrocket when it turned back on the industry might ruin it, sending future prices down into the bottom of a hole as it did last time.

So we may be well satisfied that a ceiling has been established. It is a good time, however, to get yourself out of debt and to seek an outlet for your honey that will remain worthwhile when lower prices return.

— V —

"THE BEEKEEPING ANNUAL"

"The Beekeeping Annual," a British publication, edited by Herbert Mace, price seven pence by post. Address —The Beekeeping Annual, Station Road, Harlow, Essex, England.

This paper bound publication of about thirty pages reminds us of the Old Farmer's Almanac of New England. It contains useful information, recipes for syrup, candy, honey wines, size of frames, tables of bee metamorphosis, advances in science and practice by Annie D. Betts, a review of bee books of the year, obituary, British Association addresses, county and district associations. Anybody on this side interested in such a publication communicate directly with the address given.

QUEENS BRED FOR RESISTANCE TO AMERICAN FOULBROOD

By O. W. PARK,
Iowa Agricultural Experiment Station,
Ames

QUEENS from stock that has been selected, tested and line-bred for resistance to American foulbrood for eight generations are now available for use in the fight against that age-old scourge of the apiary. These queens are a product of experiments begun at Atlantic, Iowa, in 1935 in the hope of developing a strain of bees resistant to American foulbrood. Results already have more than justified that hope.

While the final goal—a strain that will breed true for resistance—has not been closely approached as yet, the proportion of this stock which shows a high degree of resistance is considered sufficient to warrant its propagation, distribution and use as a helpful tool in a victory campaign against American foulbrood. Work is being continued on further improvement of this stock.

Disease-resistant stock should not be considered a "cure-all," and its use in no way justifies any beekeeper in assuming that his troubles with disease will evaporate upon introduction of queens bred for resistance. The price of security is not so cheap as that, but intelligent use has demonstrated that this stock gives gratifying results not only in greatly reduced losses from disease but also in the production of profitable honey crops. For these reasons, N. I. Lyle, former president of the Iowa Beekeepers' Association and one of Iowa's most successful honey producers, now has discontinued the use of all other stock. In the meantime his losses from foulbrood have dwindled from about \$500 a year to losses of small consequence. Intelligent use of queens bred for resistance is steadily reducing losses from American foulbrood both in Iowa and elsewhere.

How to use Resistant Stock.—Resistant queens are used most effectively when introduced into apparently clean colonies as a preventive measure, and they are especially valuable in a possible "pick-up" location. In any yard where American foulbrood is present, the first step in the intelligent use of this stock is to clean up all known disease in the apiary at

once and thoroughly. If the shaking treatment is employed, requeening with resistant stock will go far toward preventing reappearance of the disease in colonies so treated. In order to reduce the chances of the disease breaking out in other colonies, every colony in the yard should be headed by a queen bred for resistance.

While most colonies of this stock are far less likely to become diseased than are common strains, and usually are not so seriously affected when they do, **it should be distinctly understood** that resistant stock is not foulbrood-proof, as some have supposed. It is **only resistant**, and may take disease if exposed to too much of it.

Since this stock still is in the experimental stage and does not maintain itself without constant selection and careful breeding on the basis of reliable tests, it would seem wise for the apiarist to requeen at least half the colonies in each yard with resistant stock every year, requeening the alternate half the following season. In several respects this resistant-stock program resembles the hybrid corn situation. It is no more practical for the honey producer to raise his own queens from this stock than it is for the ordinary farmer to grow his own hybrid seed-corn.

Don'ts

1. Don't expect to cure a case of American foulbrood merely by introducing a queen of resistant stock.
2. Don't tolerate any infected material in or around the apiary for any reason.
2. Don't attempt to rear your own queens if you want to maintain a high degree of resistance.
4. Don't experiment with disease. It will cost you less to let state and federal agencies do that for you.

Remember

1. Resistant stock is not foulbrood-proof.
2. Be alert to detect the early presence of disease in any colony at any time, then deal with it intelligently.

3. The effectiveness of resistant stock will increase through its continued and general use in the apiary and in the community.

4. Encourage neighbors to use resistant stock for your mutual protection against American foulbrood.

5. Supersedure (often unrecognized and unsuspected) can give unsatisfactory results. Correct this by clipping your queens before introducing them and replace any that are superseded.

6. As always, the price of security is eternal vigilance.

7. If users of resistant stock will manage their colonies with the above points in mind, few will have reason to be disappointed in its performance.

— V —

BEEKEEPING AND VOCATIONAL AGRICULTURE

By W. H. Purser,
Teacher Vocational
Agriculture,
Brilliant, Alabama

FOR the past several years it has been my pleasure to work with a number of boys in my all-day classes and farmers in my evening classes who were beekeepers. The students in most cases who have kept bees as part of their supervised farming programs have been leaders in school or the community. It would seem that beekeeping broadens the outlook on life or that only natural leaders keep bees.

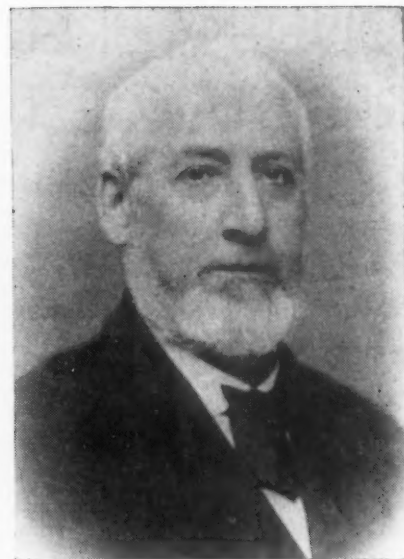
Bees have paid the students the greatest income per hour for labor invested than any other productive project in our community. Bees fit well into the renter or tenant program and they furnish a food that is unexcelled. Beeswax is a war essential and beekeeping furnishes an unlimited amount of recreation, study, and research.

It has been my aim to assist farmers already in the bee business rather than start new beekeepers. In 1941 Mr. Belton Roberts, an evening class member, became interested in improving his bees. He had about 40 hives in what he called homemade patent hives. He had ordered part of his frames, made his bodies, tops, bottoms, and shallow supers. Practically no foundation comb or wire had been used. He made no effort to control swarming. In fact he was glad to have a swarm since that was where he was getting most of his honey. I visited Mr. Roberts and invited him to visit my apiary. He

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Laboratory, workshop, and apiary of Dr. L. R. Watson, at Alfred, New York, where controlled mating, being perfected by Dr. Watson, may solve the problems of breeding future strains of the honeybee.



Moses Quinby, a New Yorker and father of commercial beekeeping; an early advocate of the large brood nest.

CHARACTERISTICS OF EMPIRE STATE BEEKEEPING

By WILLIAM L. COGGSHALL

COMMERCIAL beekeeping is an old occupation in New York and dates back nearly to the invention of the movable frame hive which made beekeeping possible. Through these many years, beekeeping has become a family tradition, and second, third and even fourth generations now work with bees in the same areas as did their fathers before them. Some apiaries have been in exactly the same places for fifty years or more through good seasons and through poor.

Many of the early leaders lived in New York, among them, Quinby, who developed the deep hive, the forerunner of the Dadant; Doolittle, famous for queen-rearing; Hoffman, inventor of the self-spacing frame; Elwood and Hetherington among the first extensive commercial operators, each with about three thousand colonies.

However, the industry is not as old by some thirty thousand years as the event which determined where beekeeping could be practiced in the state. I refer to the great glacier or ice sheet, which traveled from the far north, laying down the soils and leaving great beauty in the gorges, lakes and countryside.

There are two general honey producing areas, one includes the north-

ern part of the state where the residual rock (that from which the soil is derived) is limestone. This soil is particularly adapted for nectar secretion from clover due to its high lime content, and here colony yields are generally better than elsewhere in the state.

The other area includes that region

south of the limestone derived soil, the lime content becoming progressively less the farther south one goes. The lime, when present, was brought in by the glacier from farther north. The regular soil type of this area is of shale and sandstone derivation, tending to be acid. Buckwheat is grown extensively, and on



Alexander Apiary, at De Lanson, for long the largest single apiary in existence.



However, the orthodox, two-story ten-frame system prevails in a state where conventional methods long held sway.

this acid soil, nectar secretion is often abundant, so crops of practically pure buckwheat honey are often secured. The buckwheat honeyflow begins about August 15 and is generally over early in September. The clover crops are usually much smaller in this area than in northern New York. This region has been called a transition zone in geology and it is also one in a beekeeping sense, because as the lime content drops, so do clover yields, and buckwheat gradually enters the picture.

At one time or another, beekeeping has been tried in every section of the state. Commercial beekeeping has been segregated in certain areas while in others it has practically disappeared, leaving many so-called hobby beekeepers.

The state may be divided into three groups. Group 1, including northern New York, a belt from east to west across the central part of the state, and the Finger Lakes region. Here commercial conditions largely prevail. Group 2, the fruit areas of the Lake Ontario section of western New York and the Hudson Valley, where bees are kept especially for pollination. Group 3, southern and eastern New York and many small areas in other parts of the state where bees are in the hands of farmers or kept by professional men as a hobby.

The New York clover crop is usually a mixture of alsike and white clover. In some sections, especially northern New York, it may often be supplemented by basswood. In central New York, alfalfa may furnish a large amount of honey with the clover, this being reported more and more elsewhere also.

Forty or fifty years ago, basswood, a honey source native to this country,

was the source of the major crop, partly due to the fact that basswood blooms early in July, and the bees were in better strength then than when clover blossoms in June. This was due to the poorer wintering conditions at that time, when twenty-five per cent winter loss was not considered unusual. The basswood trees were cut off for lumber, removing that crop. Many young trees are just now beginning to yield. Apparently the trees are about forty years old before they produce nectar and seed. It has been predicted that basswood will once again become an important source of honey as more trees commence yielding. If this is true, a market will have to be developed for the honey because of its characteristic flavor which is not known to the younger generation. In the fall, buckwheat is often supplemented by goldenrod and aster, also native plants.

In New York state, there are approximately thirteen thousand beekeepers with about one hundred sixty-five thousand colonies producing an average of from seven to ten million pounds of honey, slightly more than a million pounds of which are buckwheat. Approximately six hundred beekeepers have more than fifty colonies. The largest commercial outfits have approximately two thousand, although one family has around four thousand.

Many of the larger outfits use two story colonies, but there are still some who prefer the single story Langstroth. Also, while many use central extracting plants, some prefer to extract at the outyards. It is also interesting to note that New Yorkers are conservative, probably more so than in other states. Where many

fundamental beekeeping practices were devised over a period of years and the business handed down from one generation to another, this is not strange. Changes adopted gradually are all the more apt to remain. New York beekeepers make haste slowly.

Another point is the question of odd size equipment. New York has been criticized by many because of hives of ancient vintage and odd dimension. At the time commercial beekeeping was developing, there was a terrific struggle over hive sizes, and many beekeepers devised their own. Since the equipment was sturdily built of good materials, it has weathered the storms and is still serviceable.

Bee diseases have been widely scattered through the state and both European and American foulbrood have played a part in the history and development of beekeeping. New York has the rather doubtful distinction of being the state in which European foulbrood first appeared in 1895. The disease wiped out literally hundreds of beekeepers and yet it is seldom seen today in any well managed outfit.

American foulbrood continued and became a serious menace to the industry. The bee population dropped 45 per cent from 1900 to 1930 and disease played an important role in it, although it was not the only cause of the decrease. Inspection work started even previous to 1900, but it was not until 1930 that real drastic steps were taken and more money was made available and the inspection system reorganized. An exceptional reduction in disease has taken place, with most of the credit due to A. C. Gould, New York's exceedingly efficient chief inspector.

An encouraging factor is the soil building program in which better practices are being taught farmers in the use of fertilizers and in soil conservation. In soil conservation, lime is made available to cooperating farmers at a nominal cost.

The pasture improvement program offers a possibility of increased honey yields. Through the use of lime and superphosphate, which supplies phosphorus, a special pasture mixture has been worked out which should be of interest to every beekeeper. It has been found that the commercial white Dutch clover is not as persistent in growth as the wild white clover which is slightly different. In this new mixture, the persistent wild white is an important percentage and with the use of lime and superphosphate, it will live and multiply for years making an excellent pasture, and at the same time, providing a large acreage of clover for the bees.

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At left, crop in three cartons; at right, pollinated by the bees crop increased to four cartons, in trial plots.

A MEASUREMENT OF THE VALUE OF BEES IN THE POLLINATION OF LIMA BEANS

By J. M. AMOS,
Assistant Extension Specialist in Entomology,
University of Delaware,
Newark, Delaware

LIMA beans were first grown in Delaware as a commercial crop in 1928. There has been some fluctuation in the acreage but the general trend has been upward. During 1940* there were 11,500 acres grown for processing in the state and it is estimated that the acreage increased in 1941 and 1942 to such an extent that from 12,000 to 14,000 acres were grown the past season. Delaware now ranks as the leading state in the production of lima beans for canning. The average yield over this period of years has been about a half ton of shelled beans per acre. The average price of \$59.00 per ton has varied from year to year depending upon the demand and the color of maturity of the beans. The total income to residents of the state from this source was estimated at more than a quarter of a million dollars* but is

*U. S. D. A. Agricultural Statistics, 1941.

probably twice that amount now since the price of acreage has increased. No doubt the yield per acre has also increased in recent years through the employment of better varieties, cultivation and fertilization.

Since the State Beekeepers' Association was organized in Delaware in 1936 through the efforts of the Agricultural Extension Service, there has been considerable discussion among beekeepers and growers of lima beans as to whether or not bees aid in pollinating lima beans. One former grower of lima beans felt that it paid him to rent bees and move them from place to place as a supplement to the natural pollinating insects, although he had no records to show that this was true. Other growers feel that, since lima beans are self-pollinating, bees are of little or no benefit.

A demonstration was conducted on the farm of Carlton Clifton, near

Milton, Delaware during the growing season of 1942 to determine with some degree of accuracy the value of bees as pollinating agents of lima beans. Thirty colonies of bees were located within flight range (one mile) of the plantings of beans used in the demonstration. This work included five plantings of beans which began to bloom early in July and continued until early in September. Four cages, four feet long, two feet wide and three feet high were used on each planting and left on the beans for the period of two to three weeks when the bulk of the blossoms were available for fertilization and were attractive to the bees. At harvest, the plants were taken from the caged area and an equal number were taken nearby, from the same or adjacent row, for comparison. Records were kept of the numbers of plants, pods, and beans and of the weights of the

Table I—A Comparison of the Results Obtained With and Without the Use of Bees for the Pollination of Lima Beans

Plantings	Plants shaded*; bees not excluded				Plants caged; bees excluded				No of bees in favor of bee pollination
	Number of			Wt. of Beans (gms.)	Number of			Wt. of Beans (gms.)	
	Plants	Pods	Beans		Plants	Pods	Beans		
First	47	587	1636	797.3	47	495	1269	553.5	367
Second	50	724	1292	813.0	50	355	689	447.8	603
Third	51	678	1774	1009.0	51	593	1496	848.3	278
Fourth	52	620	1068	770.0	52	510	1002	746.5	66
Fifth	50	526	1236	722.0	50	417	971	584.0	265
Total	250	3135	7006	4111.3	250	2370	5427	3180.1	1579
Average per plant	12.54	28.02	16.4		9.48	21.7	12.7	6.3	
Average beans per pod 2.23					Average beans per pod 2.28				
Average weight per bean in grams .58					Average weight per bean in grams .58				
Yield of shelled beans per acre in tons 1.013					Yield of shelled beans per acre in tons .784				

*Shading, as described, was done only on plantings 3, 4 and 5.

various lots of shelled beans. Such great differences in yield existed between the caged and uncaged plants on the first planting, it was thought that the shading caused by the light bandage cloth used to cover the cages produced sufficient light reduction to influence the yield of the plants within. It should be noted, however, that this planting of beans was the first to come into bloom and the bee population on this acreage was unusually high for there were no other fields competing for the services of the bees. In order to more nearly equalize the light intensity falling on the uncaged plants with that on the caged plants, an all screen cage which excluded less light was made. The light falling on the upper leaves was then measured by a photographic light meter. It was found that a similar light intensity could be maintained about the uncaged plants by placing a piece of bandage cloth, three feet wide, on a frame support about three feet above them. The bees readily visited the plants under this canopy. The writer realizes that the quality of the light on the plants concerned might not be the same and that the lower portion of the leaves of the screen-caged plants were shaded more than those to which they were compared but he feels, none-the-less, that the difference in results obtained are worthy of consideration by the growers of lima beans for pollination and by the beekeepers for honey production. The screen cage and shading device were used on the third, fourth and fifth plantings. On the second planting, a cage made of cloth sides and a screen top, a transition step in attempting to equalize the light factor, was used. The data obtained in this demonstration is presented in Table I.

From the examination of the results obtained by counting and weighing the beans from a total of 250 bean plants taken from five plantings, it will be noted that approximately three more pods containing beans were produced per plant where the bees had free access to the plants

than where the bees were excluded. There was also an average of 116 empty pods per planting on the former and 64 on the latter. Just how many of these empty pods would have produced beans is not known because the beans are cut while immature to obtain a high percentage of the green limas. It would seem that the activity of the bees influences the number of pods produced by the bean plant and consequently the total number of beans. Had all of the seeds produced by the bee pollinated and self-pollinated plants been permitted to mature, the total difference in the number of beans might have been even greater. The number of beans per pod and the weight of each bean evidently are inherited factors in that they are practically the same.

It was estimated from the records taken that there are approximately 56,000 plants per acre when the rows are 28 inches apart and the plants spaced 4 inches in the row. Computed on this basis, the yield per acre from the self-fertilized plants was .784 tons, as compared with 1.013 tons from the bee-pollinated plants. This represents an increase of about 30 per cent in yield due to the presence of bees as pollinating agents for the crop. From August 4 to September 28, a total of 11.5 inches of rain fell on 29 different days. The longest period during which no rain fell was eight days which occurred from August 30 to September 6 inclusive. The third, fourth and fifth plantings of beans were affected by this rainy period. The bees were confined to their hives most of the time and their normal activities were so completely interrupted that two colonies swarmed late in August. The surplus honey was only 35 to 40 lbs. per colony, while from 80 to 120 lbs. was anticipated on the basis of past experience.

Corresponding to this inactivity of the bees, there was a marked reduction in the number of beans produced in this demonstration by the plantings coming into bloom during the rainy weather. Planting number 4, which

came into bloom on August 10, was rained upon five days of the following week. This planting showed the smallest increase in yield due to reduced bee activity. Observations indicate that nectar secretion by lima beans is greatest when the plants first come into bloom and remain intense for about a week following which it tapers off considerably. A succession of plantings is necessary to provide a good honeyflow. In the area where these experiments were conducted little surplus honey was stored from early August until mid September because of the rainy weather.

At the prevailing prices in 1942 of \$70 per ton for green lima beans and \$20 per ton for white ones (assuming that the beans graded 60 per cent green and 40 per cent white), the increased production from the use of bees in pollination would be valued at \$11.36 per acre. This information is not presented as being conclusive, because of the light factor involved, but is offered as an indication of what bees can do to help increase the production of this important war-time food.

— V —

BEEKEEPING AND VOCATIONAL AGRICULTURE

(Continued page 237)

looked a little surprised when I puffed a little smoke at the entrance of a hive but he was more surprised after he had removed four supers well filled and capped off of one hive. He had never dreamed of needing more than 2 shallow supers per hive. Mr. Roberts became interested, had all hives requeened and the bees transferred to modern hives. He should, under normal conditions, average 100 lbs. of honey per colony this summer where he has been making less than 10 lbs. He will also have 40 hives worth ten dollars each where they were worth one dollar.

I have heard a number of agricultural workers confess a dislike for bees. This is unfortunate since the Alabama farm beekeeper needs our help. We as leaders should at least help launch a war on box hives in Alabama and the South.

— V —

HONEY FOR GHANDI

According to United Press Ghandi in his twenty-one day protest fast when he reached the end of the period began breaking his fast by drinking orange juice, honey and water and proceeded from this to the more solid food as his strength increased.



Dr. B. L. Hammond (top) shows giant stalks and profuse foliage of cultivated goldenrod. (Bottom) Dr. Hammond examines rooting stem-cuttings from goldenrod. (Pictures from Farm Journal, February).

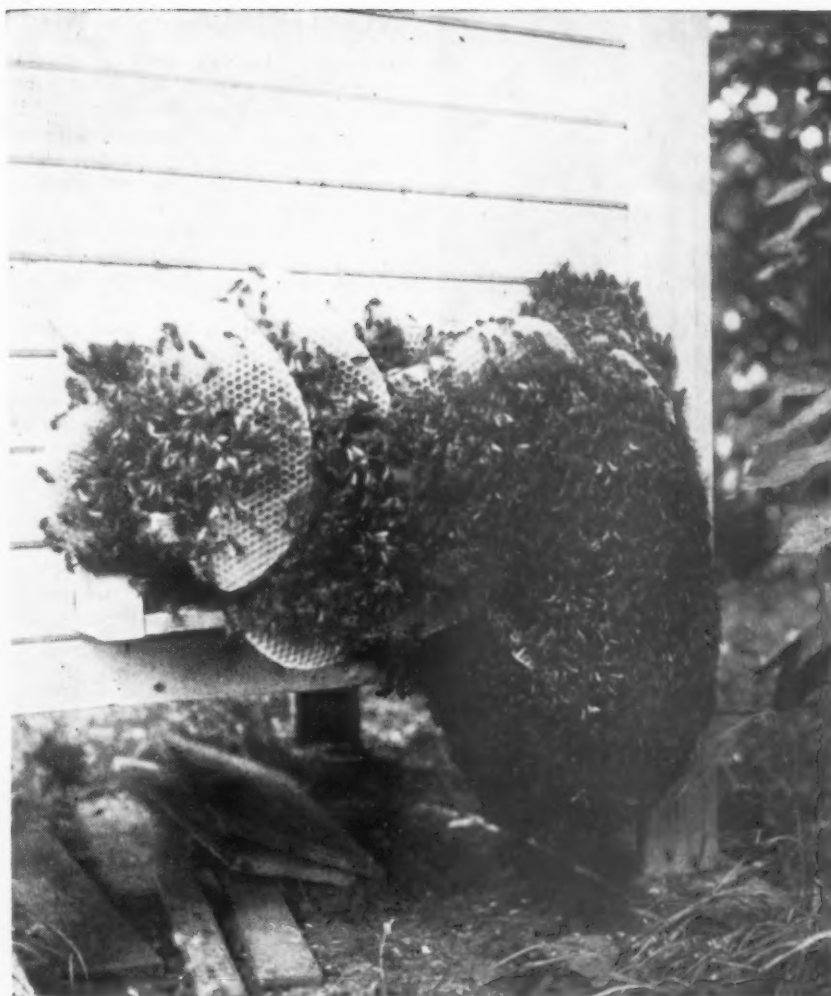


Dr. Hammond in a field of goldenrod with plumes higher than his head.

RUBBER FROM GOLDENROD

In the Farm Journal for February appears an article "Farm Rubber Tests," with one of these three pictures. Permission to use this, with the addition of the other two pictures, was received from Elizabeth W. Kennedy, Secretary to the Editor.

Dr. B. L. Hammond and his associates at the Bureau of Plant Industry experiment station near Savannah, Georgia, have domesticated strains of goldenrod six feet tall whose leaves have a rubber content of six to ten per cent. This spring, southeast farmers will plant 15,000 acres of the seed in another giant government experiment to home-grown tires and tubes.



OUTDOORS AGAIN

Josef Krysanter of Motala, Sweden, sends this picture of an outdoor colony which seems to top them all. What

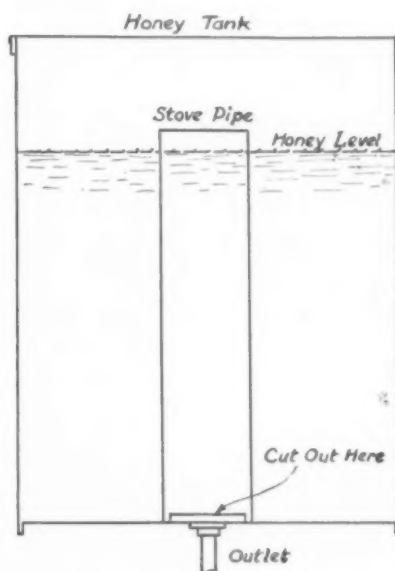
a big cluster of bees and large number of combs, some of them not built parallel, but at different angles.

— V —

A HONEY TANK

This is the way I used to keep bees and foam out of sixty pound cans of honey. The center cylinder is a piece of galvanized stove pipe 6-8 inches in diameter and long enough to be above the level of the honey when the tank is full. The outlet for the honey is in the bottom of the tank and the end of the stove pipe is cut out about $\frac{1}{4}$ inch, half way around. Pushing the foam on top of the honey in the tank to one side, the pipe is set down into the clear honey, so exposed, and set over the outlet. This does away with the usual vortex and if the tank slopes a little towards the honey outlet, I have drawn honey to within 40 pounds of empty, with no foam or other material coming out.

Harry Harberg,
Minnesota.



BEEES IN A CLAY BANK

These bees were attached to a bank of clay or soft limestone under a four foot overhang formed by a layer of hardpan. A narrow ledge near the base of the perpendicular cliff offered a precarious support for the ladder, but it was found that a man standing on one of the top rungs of the eighteen foot ladder was unable to reach the cluster of bees, which appeared to be of enormous size. Below the ledge, there is a drop of forty feet to the river.

These bees were in what is locally known as the Clay Banks on the Umatilla River, two miles west of Hermiston. A friend of mine wanted to get them down. I advised him to wait until the bees should freeze during winter, when the combs could be raked down and some of the honey saved, but when visited in February, however, the bees were still very much alive, although the combs showed signs of having been riddled by shots and perhaps by a rock or two.

This is the only swarm I have known to winter entirely in the open. The cliff faces southeast and receives the full warmth of the sun nearly all day.

J. Skovbo,
Hermiston, Oregon.



Guatemala City. Cerro del Carmen; the Hermitage, north of the capital. (Gift of H. L. Gueydan to Pan American Union.)



Sugar cane culture. (Gift of Luis Colom to Pan American Union.)



A nursery of young coffee plants, protected by the shade of banana trees. (Courtesy of Schlubach, Sapper and Co.—Pan American Union.)

GUATEMALA

Guatemala has an area of 48,290 square miles, with an estimated population of over 2,000,000 people. The legislative powers of the republic are vested in a national assembly and a council of state. The president is elected for a term of six years.

Primary education is free and compulsory and well maintained. Agriculture is the chief occupation and coffee by far the most important product. Chicle is also gathered extensively for export. Corn, wheat and beans are valuable crops. Sugar cane and bananas are extensively cultivated in several districts, with rice, tobacco, cocoa and cotton among the minor products. Textiles and furniture are manufactured.

On the table lands of the interior, many thousands of acres are devoted to cattle, sheep and pigs. Mahogany, cedar and dye wood are produced in abundance, and gold, silver and salt are the chief minerals.

Beekeeping is described in the following letter from the Secretary of the State:

Guatemala produces honey of high quality, honey that has always been in demand for export. Its quality is due first to the fact that it is produced in a territory abundant in varied flora, and second, to the good care given to the bees.

According to present available statistics, there are about 60,000 colonies of bees, expertly cared for, in the republic. The average exportation during the past few years is about 2,000,000 pounds of honey and 80,000 pounds of beeswax.

Due to the limitation of the markets, because of the war, many beekeepers have given up their colonies, but, today, in view of the many requests from the United States, they are turning anew to the care and improvement of their products.

Among the apicultural studies that have been made are notes by J. Luis Luiti, agricultural expert, "Apicultura", with forty-five pages of beekeeping instructions available for those who are interested in this phase of agriculture. Copies may be had from Direccion General de Agricultura, Guatemala, C. A.

— V —

SWISS FALL BACK ON GRAPE SUGAR

An Associated Press release tells of grape sugar being sold in liquid form in Switzerland to replace German beet sugar, and this has saved many Swiss people and many Swiss bees from suffering on a sugar shortage.

DEPARTMENTS



Sugar cane in Guatemala. (Luis Colom—Pan American Union).

JUNE, 1943



RECIPES



Quick Strawberry Shortcakes

- 2 cups sifted flour
- 3 teaspoons baking powder
- $\frac{1}{2}$ teaspoon salt
- 2 tablespoons sugar (optional)
- $\frac{1}{3}$ cup Spry
- $\frac{3}{4}$ cup milk (about)
- 1 quart fresh strawberries, hulled and quartered.
- $\frac{1}{4}$ cup sugar or 2 tablespoons honey
- $\frac{1}{2}$ cup heavy cream, whipped
- 2 tablespoons sugar or 1 tablespoon honey

Sift flour, baking powder, salt, and sugar. Cut in Spry until mixture is as fine as meal. Add milk, mixing until a soft dough is formed. Drop from tablespoon on baking sheet.

Bake in very hot oven (450° F.) 12 to 15 minutes. Split biscuits and put together with strawberries sweetened to taste. Top with whipped cream, sweetened as desired. Garnish with whole strawberries. Serves 8.

Lever Bros. Co.

Honey Ice Cream

- 2 cups milk
- $\frac{1}{2}$ cup mild flavored honey
- 2 egg yolks
- 1 tablespoon cornstarch
- $\frac{1}{4}$ teaspoon salt
- 2 teaspoons vanilla
- 2 cups whipped cream.

Bring milk to boiling point in double boiler. Combine the half cup of honey with the well beaten egg yolks, cornstarch and salt. Add this mixture to the milk, stirring constantly. Cook until the mixture coats a spoon. Remove from fire. Chill thoroughly. Add the whipped cream and flavoring. Freeze.

Suggestion: For those who desire more sweetening, two or three teaspoons of honey may be added to the whipped cream before mixing it with the custard.

Barbara Jeannette Harnack.

Honey Sauce For Ice Cream Sundaes

- 2 tablespoons butter
- 1 tablespoon cornstarch
- 2 tablespoons cocoa (Hershey)
- $\frac{1}{2}$ cup mild flavored honey
- $\frac{1}{2}$ cup water
- 8 marshmallows
- 1 teaspoon vanilla
- $\frac{1}{4}$ teaspoon salt
- Nuts

Melt butter in top of double boiler. Combine the cornstarch and cocoa with the honey and water. Add this mixture to the melted butter. Cook until thickened, stirring constantly. Add marshmallows which have been cut in quarters. Stir until smooth. Remove from fire and add flavoring and salt.

Pour over ice cream and garnish with nuts.

Barbara Jeannette Harnack.

— V —

Combination Hot Bread

- 1 quart of milk
- 1 cup mashed potatoes
- $\frac{1}{2}$ cup water
- 2 cake yeasts (Flieschmans)
- 1 cup honey
- 1 cup lard
- 2 teaspoons salt
- 1 soda
- 2 teaspoons baking powder
- Flour

Scald milk and let cool. When lukewarm add mashed potatoes, salt, baking powder, yeast that has been dissolved in the $\frac{1}{2}$ cup water, sugar, lard and enough flour to make a soft sponge, about $1\frac{1}{2}$ quarts will be required. Let stand about 2 hours or until the sponge is light, then add flour to make a stiff dough. Knead thoroughly. Put where the temperature is low enough to prevent the yeast and baking powder from acting, but not cold enough to freeze. The dough is at its best after at least 24 hours old.

Cut off a quantity as it is used. It may be used in various ways, buns and cinnamon rolls are especially delicious. Using a mixture of cinnamon and honey on the dough after being rolled very thin, and spread with butter. Roll and seal then pull the roll gently lengthwise to make the roll uniform in circumference.

Lola C. Beckett,
Indiana.

— V —

Delicious Cake Frosting

- 1 egg white
- $\frac{1}{2}$ cup honey
- $\frac{1}{2}$ teaspoon vanilla

Have boiling water in the bottom of double boiler, keep boiling, put honey and egg white in top of boiler, beat until firm with a dover egg beater, add vanilla and spread on cake. This frosting will never sugar.

Mrs. Walter B. Hoffman



AMERICAN HONEY INSTITUTE

What is the Black Market?

The Black Market is a transaction which violates rationing regulations, food distribution, or price control.

Where is the Black Market?

It is wherever such a transaction takes place.

— V —

When are we going to have a Honey Corner in every store. How about the graduated rack for various size containers.

— V —

For those who place advertisements in papers, print cards to be circulated, or who carry on a mail order honey business, here are some suggestions:

Suggestion 1—"Why buzz around from store to store looking for honey. Save time by calling at —B's—store where you will find —A's—honey." or "Save time by sending \$1.00 to John —————, address —————, for ————— pounds of honey."

Suggestion 2—Give suggestions for using the 1 or 5 pound jar of honey.

— V —

Have you ordered some of the red, white, and blue lunch box folders from the Institute?

— V —

A rerun of the popular and good looking 5-pound pail leaflet will not be made. Those who use this leaflet

should order a supply before the amount on hand runs out.

— V —

War time brings epidemics. America needs at least 100,000 nurse's aides. Is a course offered in your city?

— V —

When you have used fat as many times as you can in your home, turn it in for war purposes.

— V —

The May 15th issue of the Saturday Evening Post has an interesting article by Alexander Key entitled "Honey and Hoeecake."

— V —

"Have you started an apiary?" is one of the questions asked among society women these days.

— V —

One of the most attractive food pictures that is appearing in newspapers from coast to coast is the strawberry ring shortcake with the center filled with honey meringue. The caption is

"Strawberry Ring Shortcake—Honey sweetens the berries, honey meringue pinch hits for whipped cream, and little butter is required."

WINTER LOSSES

Winter losses are reported considerably heavier than earlier anticipated all through the middle west, reports varying anywhere from ten to fifty, and in some cases seventy-five per cent. This, of course, has produced a frantic demand for packages resulting in the biggest June and late May business the shippers in the South have ever experienced, many beekeepers, not being able to secure bees to replace the losses.

Feeding is also heavy and the overwintered colonies are requiring more sugar than was earlier anticipated making it necessary for many to resort to emergency rations, borrowing on sugar rationing totals of 1944.

If the equipment is idle at the end of the spring period, probably the

best way out is to make July divides with good queens from the honey producing colonies, allowing them to grow through until fall and wintering them in order to end the season with as much equipment full as possible.

— V —

NATURE'S BEE BRUSH

I have not yet gotten away from the need of a bee brush, but I had to plant Norway pine seedlings in my bee yard and wait for them to get big enough to be in the way before I discovered that a Norway tuft was exactly the thing I had been looking for to brush bees without injuring them or having them stick to the brush. Use them sidewise.

Lynn Reynolds,
Wisconsin

Thanks, Ten Millions

WE ARE BOOKED TO THE LIMIT
FOR 1943. TRY US NEXT YEAR
The VICTOR APIARIES, West Columbia, Tex.

NORTHERN BRED—LEATHER
COLORED

ITALIAN QUEENS

75 CENTS EACH

DIEMER BEE CO., Liberty, Mo.



**CONSIGNMENTS
WANTED**

Comb and strained
honey. We pay highest
market prices.
Please write for
tags and quotations.
106 S. Water Market

Italian Bees and Queens

After nine years' experience with large shippers, I have picked the methods of putting out quality.

Satisfaction guaranteed

Prices

	2-Lb.	3-Lb.
1 to 24, Queens 75c ea.,	\$2.80	\$3.65
25 to 99, Queens 70c ea.,	2.65	3.45

Kermit Anderson

OPP, ALABAMA

FOR SALE

BRIGHT YELLOW AND THREE
BAND QUEENS

GRAYDON BROS.

RT. 2 GREENVILLE, ALA.

Why not book your order now for
HOMAN'S

3-Banded Italian Bees & Queens

	1-24	25-49	50-499
2-Lb. with queen	\$2.85	\$2.60	\$2.80
3-Lb. with queen	3.75	3.60	3.50
Queens	.85	.80	.75

HOMAN BROTHERS

SHANNON, MISSISSIPPI

Queens Queens

Italian Bees and Queens from government stock bred for resistance to disease, with health certificate, and live delivery guaranteed.

	2-Lb.	3-Lb.
Combless		
1 to 24, each	\$2.70	\$3.50
25 to 49, each	2.55	3.35
50 or more	2.45	3.25
Queens untested ea.	80c.	Air Mail 85c

Oscar Arnouville
HAMBURG, LOUISIANA

BETTER BRED QUEENS THREE-BANDED ITALIANS

If you were disappointed in getting packages this spring, why not re-queen the colonies you do have to make them produce better? We are offering queens at the following price for June:

1 to 24	-----	\$.75
25 to 99	-----	.70
100 to 499	-----	.65

CALVERT APIARIES CALVERT, ALABAMA



COMPLETE LINE

Hives, supers, frames, sections, and foundation. Also a limited supply of critical and restricted items. Send us a list of your requirements and we will quote. Or send us your orders and we will fill them to the best of our ability.

A. H. RUSCH & SON CO.
REEDSVILLE, WISCONSIN



Puett's Select Italians

Select, Untested Italian Queens 75c Each
Any Quantity



TESTED QUEENS \$1.50 EACH

THE PUETT CO. HAHIRA, GEORGIA

CARNIOLAN QUEENS 75 CENTS EACH
EPHARDT'S HONEY FARMS, POSTPAID
Plaucheville, La.

ST. ROMAIN'S "HONEY GIRL" ITALIANS

We did not over book. Except for a few days delay at the start due to difficulty of getting out queens caused by severe and continued cold in March, we will ship all orders on dates promised. We will have a large supply of package bees and queens throughout the month of May and June.

Prices include a young queen, daughters of line-bred pedigreed breeders

	3-Lb.	4-Lb.
1 to 3 packages	\$3.90 each	\$4.70 each
4 to 9 packages	3.75 each	4.55 each
10 or more packages	3.60 each	4.40 each

Queens alone \$1.00 each. Live delivery. Certificate of inspection, certifying freedom from disease with each shipment.

St. Romain's "Honey Girl" Apiaries, Moreauville, La.

Quality Bred Three Banded Italian Bees and Queens

Customers—With my lifetime experience in rearing queens and shipping package bees you can't find anyone who will serve you better than I can.

Prices on Queens and Package Bees with Queens

Lots of	Queens	2-Lb. Pkgs.	3-Lb. Pkgs.
1 to 24	\$.75	\$2.85	\$3.75
25 to 49	.70	2.60	3.60
50 to 100	.65	2.50	3.50

FARRIS HOMAN : SHANNON, MISS.

MEETINGS AND EVENTS

New Rochelle (N. Y.) June 6

The next regular monthly meeting of the New Rochelle Beekeepers Association will be held at the Hilltop Apiary, 325 Webster Avenue, New Rochelle, N. Y., home of the president, on Sunday, June 6, 1943 at 2:30 P. M. We hope to make this meeting our first outdoor gathering of the year.

Swarming of bees and its prevention will be discussed. An interesting program is planned for this meeting. Expert beemen will be on hand to answer your bee questions. Anyone interested in bees from Westchester County and vicinity are welcome to attend.

Refreshments will be served.

S. Barnes, Publicity.

— V —

Montgomery County (Pa.) June 12

The Montgomery County, Pa., Beekeepers' Association will hold its annual meeting Saturday afternoon, June 12th, 2:30 P. M. at the home of Mr. A. H. Cassel on Whitehall Road between Germantown Pike and Skip-pack Pike, Norristown, Pa.

Mr. Cassel is a charter member of the association. He has kept bees for over sixty years. Several years ago when he sold his farm he sold all his bees and equipment but was unable to resist the temptation of the golden throng and shortly thereafter acquired several colonies.

Mr. E. B. Everitt, president of the Pennsylvania State Beekeepers' Association will be the speaker. Everyone interested in bees and honey is invited.

— V —

Bronx County (N. Y.) June 13

The Bronx County Beekeepers' Association will hold their regular monthly meeting Sunday, June 13 at 2:30 in the afternoon at the residence home of Mr. H. Wodke (The Institute for the Education of the Blind) 999 Pelham Parkway, Bronx. The hives of the institute will be examined, and after this business session problems of beekeeping will be discussed. At this time of the year the plants and flowers on the grounds will be at their best to amke especial effort to attend this gathering. If interested in beekeeping we extend you a hearty invitation. Refreshments will be served.

Harry Newman, Sec'y.

— V —

Tri-County (Ohio) Delphos, June 27

The tri-county annual field meet will be held at the tent at the Mrs.

Pearl Leininger home Sunday afternoon, June 27, 1943, Delphos, Ohio. Meeting to begin at 1:00 P. M. slow time, with national and state speakers present as usual.

S. O. Allen, Sec'y-Treas.

— V —

Cook-Du Page (Ill.) Beekeepers Association Meeting, June 20

The Cook Du Page Beekeepers' Association will hold a meeting Sunday, June 20, at the apiary of Rudy Hummelhans, Jr., Hopp Road, Wilmette, Illinois, at 1:30 p. m. Dr. V. G. Milum, of the University of Illinois, will give a talk on "Coming Changes in Beekeeping." All beekeepers and their friends are invited. Those driving, take any north and south highway to Route 58, east on Route 58 to Harms Road, Glenview, then north quarter mile to apiary. Bring something for a pot luck supper. Coffee will be served.

A. J. Smith,
Sec'y-Treas.

— V —

Meacham to Vocational Agriculture

Secretary-Treasurer F. B. Meacham, North Carolina State Association, in his spring circular, announces his appointment as a teacher of vocational agriculture for the Robersonville (N. C.) High School. He says that while his association with bees will not be very much in his new position, he hopes to be able to maintain his interest in the association and in the state beekeeping activities. Our best wishes to Mr. Meacham in his new position.

— V —

CHARACTERISTICS OF EMPIRE STATE BEEKEEPING

(Continued from page 239)

New York has advantages in marketing that have helped to stave off ruin for beekeepers the past several years with low prices, and

small crops. First, is its proximity to market. In the immediate north-eastern section is located a very large percentage of the population of the United States. New York alone, in 1930, had a population of twelve and one-half million. The second advantage is the demand for New York state clover honey. Sweet clover, alfalfa and other flavors are substituted in many instances, but there are buyers who still insist on New York honey. It has been said that this is due to early tastes which make that honey best which was experienced during childhood.

An especially striking example of flavor preference is that for buckwheat honey. This dark, strongly flavored honey, is particularly preferred by many old time New Yorkers, who have either been accustomed to it, or else developed a liking for it. There are people who on tasting buckwheat honey for the first time resolve never to do so again. Fortunately for the buckwheat producers, many people came here from other lands who were used to the honeys here produced. Buckwheat is well known to many and they were able to purchase the same flavor and offer a ready market.

New York contains twenty-three per cent of the total foreign born of all in the country, and twenty-five per cent of its own population are foreign. This is important from a honey marketing standpoint because in other countries, honey has always been more important in the diet than here.

During the past three years, New York has been making a serious and successful effort to improve the producers' position by cooperative packing and marketing. Organized marketing makes possible uniformity and continuity of supply beyond the reach of the average producer trying to sell at retail. Knowledge of market conditions and sound merchandising are generally not exhibited by producers.

The Finger Lakes Honey Producers Cooperative at Groton is handling more than a million pounds of the 1942 crop. Membership has in-

creased to forty and represents approximately twenty thousand colonies of bees. Originally formed in the heart of the buckwheat region to help market that crop, it was soon found that other beekeepers outside the area were interested, and now the Co-op is handling more clover than buckwheat. The membership is state wide and extends into Pennsylvania.

Under the present set-up, the Co-operative has facilities to do the following: 1. Purchase and warehouse containers for its members in advance of their needs; 2. Warehouse honey until packed and sold, insured against loss, with advances to members; 3. Pack and merchandise honey and return profits to the members on the basis of their patronage; 4. Furnish free bulk containers to all old members and to new members after the first year. There is equipment in use to wash and dry used containers so they can be sent out again for refilling. 5. Develop regular markets and also new ones. Build for the future by ably supplying the present demand which is increasing by leaps and bounds, particularly for Dyce processed honey.

Due to increased plant and warehouse facilities and increasing consumer demand for crystallized honey, new members will be accepted at this time, subject to the approval of the Board of Directors, upon agreeing to purchase one \$25 share of stock payable out of honey turned in for marketing. Old members and new members accepted now are assured a market for their honey after the war. To wait until then to join may be too late because the consumer demand will tend to decrease rather than increase, and faithful members will naturally be given preference.

New York is trying to take the war in its stride and increase production under difficult conditions. There has been an estimated 10 per cent increase in colonies during the past year and, given a favorable season in 1943, goals in production of wax and honey can be met.

New York.

**SELL US YOUR
HONEY NOW...AND
SAFEGUARD YOUR
FUTURE SALES**

● Here is an opportunity to establish *permanent* connections with one of America's largest honey merchants. Sell us your honey now, all of it, in carload lots. (Smaller amounts accepted from nearby points.) We pay top ceiling prices. We also want your beeswax. For this we pay \$.41½ for clean, pure, yellow wax. All prices effective at shipping points. Send your samples at once. Cans returned in accordance with OPA order No. 275, if desired.

THE JOHN G. PATON COMPANY, INC., 630 Fifth Avenue, New York, N. Y.

QUEENS QUEENS QUEENS

ITALIANS

Daughters of stock bred for
resistance

CAUCASIANS

PACKAGE BEES

PRICES ON PACKAGE BEES WITH QUEENS TO MAY 21ST, 1943

	Queens	2-Lb. Bees	3-Lb. Bees	4-Lb. Bees	5-Lb. Bees
1 to 24	\$.90	\$2.95	\$3.80	\$4.60	\$5.35
25 to 99	.85	2.80	3.60	4.35	5.05
100 to 499	.80	2.65	3.40	4.10	4.75
500 up	.75	2.50	3.20	3.85	4.65

For tested queens double the price of untested.

Over 25 years' experience shipping. Paying 43 1/2 cents a pound f. o. b. your station for Beeswax in exchange for bees and queens, if you have over 50 pounds write for shipping instructions. Truckers HEAD-QUARTERS, drive in 3 1/2 miles south of Weslaco on Progresso Highway.

Blue Bonnet Apiaries, Rt. 1, Box 70 Mercedes, Texas

FAST SERVICE: AND RESULTS

Prolific, gentle, honey producing stock—four express and mail trains each day.

Queens, 1-24	95 each	24 up	90c each	
Quantity	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1-24	\$2.95	\$3.85	\$4.75	\$5.60
24 up	2.80	3.65	4.50	5.30

15% booking deposit required

DANIELS APIARIES

PICAYUNE, MISSISSIPPI

York's Package Bees & Queens

Quality Bred Italians

Booked to full capacity on package bees and queens to June 1st. Orders requesting earlier shipping will have to be returned unfilled. We regret this but the demand is far greater than ever and we can only accept orders now for June and later shipping.

QUEENS AND PACKAGE BEES WITH QUEENS

Quantity	1 to 24	25 up
Queens	\$.90 each	\$.85 each
2-Lb. Packages	2.95 each	2.80 each
3-Lb. Packages	3.80 each	3.60 each

Queens by air mail, add 5 cents per queen. Queens clipped, add 25 cents per queen. Queenless packages, deduct price of queen. Yours for full weights quality bees, young queens and satisfaction.

York Bee Company, Jesup, Ga., U.S.A.

The Universal Apiaries

WE WILL BUY YOUR "CHUNK HONEY" IN THE SUPERS. . . WRITE US TODAY
THE FRED. W. MUTH CO. Pearl and Walnut Cincinnati, Ohio

Italian Bees & Queens

Also queens from resistant stock

1-2 Lb. \$2.95; 1-3 Lb. \$3.80;

Queens, 90c each

RED STICK APIARIES

125 Lessard St.

Donalsonville, La.

Mountain Gray Queens

No more package bees for this season, but will have a fair supply of queens through the summer, prices any number post paid 80c each. Book your orders in advance. No deposit required.

Bolling Bee Co.

Bolling, Ala.

ROOT QUALITY BEE SUPPLIES

GLASS AND TIN CONTAINERS
HONEY AND BEESWAX WANTED

M. J. BECK

Successor to M. H. HUNT & SON
510 N. Cedar St., Lansing, Mich.

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Package Bees and Queens

For Quality and Service

KOEHNEN'S APIARIES

GLENN, CALIFORNIA

QUEENS OF QUALITY

75 CENTS EACH

\$65.00 Per 100

J. F. McVAY

JACKSON,

ALABAMA

HONEY WANTED

Carloads and less, all grades. Will pay top prices. Would contract now for crop. Also Beeswax.

H. & S. Honey & Wax Co., Inc.
265 Greenwich St., New York, N. Y.

IMPERIAL QUEENS

Summer prices: Untested Italian queens, 90c each; tested \$1.80 each. Untested Caucasian queens, 95 cents each; tested not available. Complete stock honey jars, also Dadant's foundation and Lewis bee supplies.

THE COFFEY APIARIES

WHITSETT, TEXAS

Package Bees & Queens

THREE-BANDED ITALIANS

For quality and prompt service.
3 lbs. package with queen at...\$3.80
2 lbs. package with queen at... 2.95
Extra queens at90
We specialize in queens. 20 yrs. in bees

Dupuis Apiaries Andre Dupuis, Prop.
Breaux Bridge, La.

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Package Bees & Queens

CAUCASIAN OR ITALIAN

F. E. Morrison

P. O. Box 324

Petaluma, Calif.

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COMPLETE STOCK

R. B. DUNNING & CO.

Broad Street

BANGOR, MAINE

ITALIAN QUEENS

\$65.00 PER 100

D. T. WINSLETT

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We render old combs, cappings and slumgum for beekeepers. Our steam wax presses get every available ounce of wax out of this material. If you are rendering your own or having this work done elsewhere, give us a chance to show you what we can do. We specialize on SLUMGUM from presses that are not operated under water. We often get from 10 to 40 per cent wax from such material.

DADANT & SONS, Hamilton, Illinois

PALMETTO QUALITY QUEENS

Our summer prices on queens are as follows: All queens 65 cents each any number. Satisfaction guaranteed.

C. G. ELLISON

BELTON, SOUTH CAROLINA

ITALIAN STRAIN BEES AND QUEENS

	Queens	2-Lbs.	3-Lbs.
1- 24.....	\$.75	\$2.80	\$3.65
25- 99.....	.70	2.65	3.45
100-499.....	.65	2.50	3.25
500 up.....	.60	2.35	3.05

The reason we have not had our ad in the Journal is that we were booked full until the first of June.

LITTLE BROS. APIARIES

Shipping point, Epes, Ala. Sumterville, Ala.

For honey's sake, join your nearest Association of Beekeepers.

Merrill's Quality Bees and Queens

Have stood the test for 30 years. Try them. They will please you too. Shipments made promptly.

PRICES

Lots of	QUEENS	Packages with Queens	
		2-Lbs.	3-Lbs.
1- 24.....	\$.75	\$2.80	\$3.65
25- 99.....	.70	2.65	3.45
100-499.....	.65	2.50	3.25

If queenless packages are desired, deduct price of queen. If larger packages or larger number are desired, write us.

MERRILL BEE COMPANY

STATE LINE, MISSISSIPPI

Mississippi's Oldest Shipper

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ROBINSON WAGNER CO. INC.

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Young laying queen, each.....	\$.60
2-Lb. Swarm with queen, each.....	2.45
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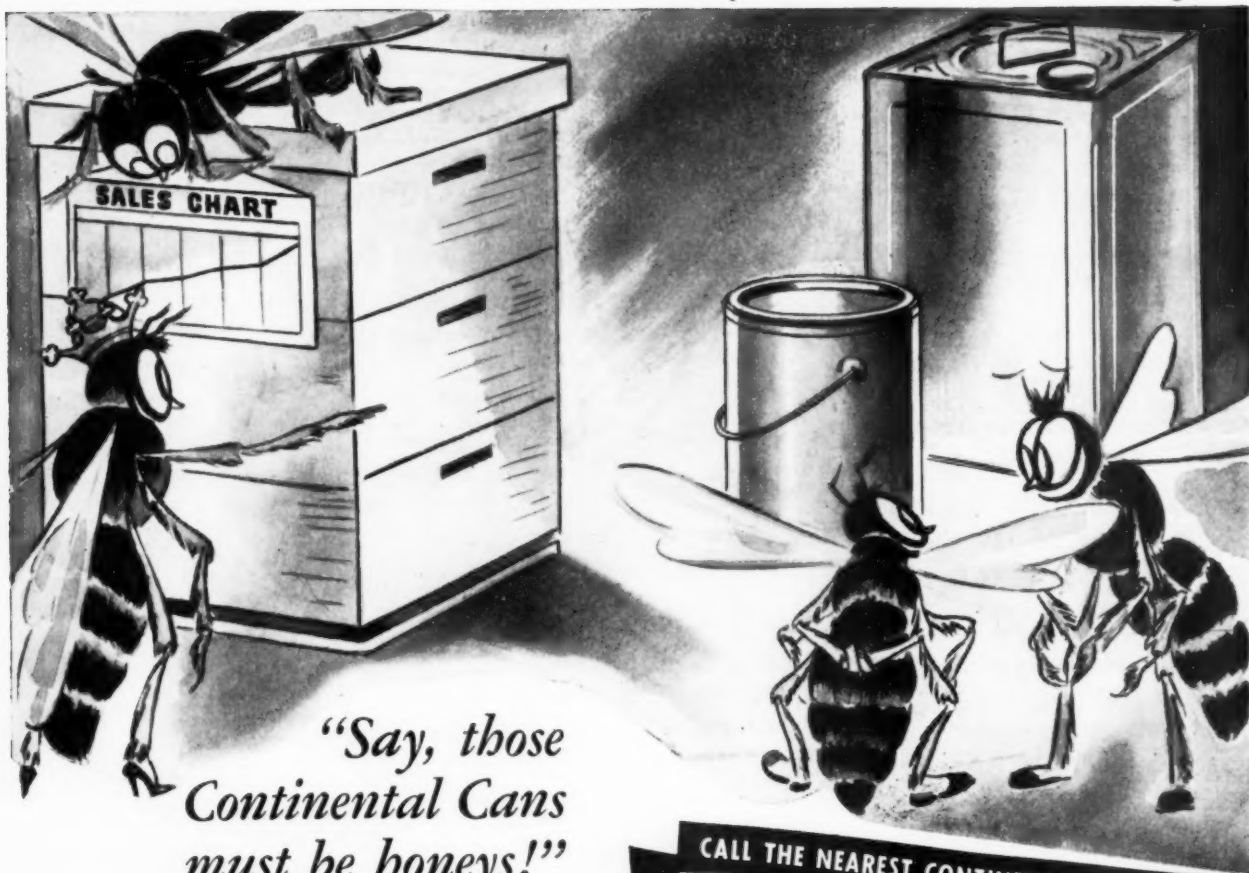
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CROP AND MARKET REPORT

Compiled by M. G. DADANT

For our June issue, we asked the following questions:

1. How many colonies as compared to 1942?
2. Condition of colonies as compared to 1942?
3. Condition of honey plants as compared to 1942?
4. Your estimate of 1943 honey crop as compared to 1942.
5. Yield of honey so far as compared to 1942?

In the New England states, the number of colonies varied all the way from 50 per cent to 120 per cent of 1942. The condition of colonies from 65 per cent to 110 per cent. The condition of honey plants is much better throughout this territory than for 1942, running as high as 200 per cent. Reporters seem to be optimistic as to the probable crop with some estimating as high as 500 per cent of the 1942 crop, and this, no doubt, is due to the fact that the crop last year was very, very short. Practically no honey has been harvested so far and bees have gathered from ordinary sources about normal. Reporters in the state of New York seem to be very optimistic as to the prospect for a far better crop.

The southeastern states, Maryland, Virginia, North Carolina, South Carolina and Florida, are still suffering from the early frost and honey plants have been severely injured. The number of colonies runs not to exceed 90 per cent of last year excepting in Florida, and some parts of Georgia where 100 per cent is reported. The condition of colonies also is poorer than last year excepting in Florida. Very few of the reporters would make a guess as to the probable crop because the season was late and the possibility for honey was severely hurt by the cold weather. Florida and Georgia, however, have fared somewhat better than the states farther north.

In the southern states of Georgia, Alabama, Louisiana, Arkansas and Kentucky, colonies appear to be at least as numerous if not a little more than 1942. The condition of bees generally is good, but some reporters say as low as 65 per cent of 1942. Honey plants are generally in better condition than last year and honey crop prospects range all the way from 70 per cent up to as high as 200 per cent of last year. The honeyflow so far has been equal to and a little better than a year ago.

In Texas, some localities have been hit by the drought and one reporter states that for five years they have not had a normal crop. Bees are in average condition and with sufficient rain, apparently a normal crop will be harvested.

It is in the North Central states that the beekeeper has been hardest hit. In the states of Ohio, Michigan, Indiana, Illinois, Iowa and Wisconsin, the reports are generally very discouraging. Number of colonies reported are all the way from 33 per cent up to normal, with only a few reporting above normal. The condition of colonies is also bad due to protracted cold, wet weather. Much feeding is being done and colonies are still being lost at the time that this is written (May 20) from starvation. In Michigan and Wisconsin especially, the loss of bees has been very heavy and while some of the better beekeepers report the condition of bees up to 100 per cent of last year, most of them report a much lower figure. In some parts of Wisconsin beekeepers are still losing their bees.

The redeeming feature in these midwestern states is that the honey plants are in better than average condition. Where the crop does not depend on sweet clover alone, there is every prospect of a far better honeyflow than in 1942. This, however, was also true a year ago,

and the cold wet weather through the honey producing weeks spoiled what might otherwise have been a good crop. The season is exceedingly late and some beekeepers are having difficulty in getting enough sugar and are having to borrow some of their 1944 quota in order to keep their bees alive. Here at Hamilton, Illinois, we have had two weeks of steady cold, rainy weather with only one or two days of sunshine. Package bees and old colonies are having to be fed constantly.

Conditions in Nebraska, Kansas, Missouri and South Dakota are considerably better than in the other midwestern states mentioned. This is due, no doubt, to the fact that those states had a pretty fair crop in 1942 and colonies went into winter quarters with more stores and in better condition. In these states, honey crop prospects are excellent. All that will be needed will be good nectar producing weather during the honey season.

South Dakota, North Dakota and Minnesota are making probably the best report of any of the states in the Mississippi Valley. There was no report of less than 100 per cent of normal colonies and condition of these colonies were as good excepting in one or two locations in Minnesota. Some producers seemed to be worried about the sweet clover weevil and several reported that the acreage of sweet clover would not be as heavy as normal. Crop prospects, however, are still good, with a possibility of a better crop than in 1942.

In the Rocky Mountain states, Wyoming, Utah, Montana, Idaho, Colorado and New Mexico, the condition of bees and number of colonies are more uniform. The lowest report was 70 per cent of normal in number of colonies and 80 per cent in condition of bees. Here, too, however, the season is late and considerable feeding is having to be done in some localities.

California is faring better than possibly any other state in the Union. The number of colonies in that state is about 10 per cent above 1942, condition of colonies is excellent, and honey plants are very much above the average. Estimates of 1943 honey crop range all the way from 125 to 200 per cent of 1942. The orange has yielded in some localities 160 per cent of 1942 and one reporter states that the crop is 200 per cent of his last year's yield. Honey plants are in excellent condition, due, no doubt, to the general rains during the winter months. California may come through with one of her old time honey crops which will help to relieve the terrific demand for honey.

Washington and Oregon reports are more encouraging. After a very bad year in 1942, our reporters seemed to be more optimistic. The number of colonies are normal and in good condition, and honey plants seem to be in good shape. Predictions are for a far better crop than was harvested last year.

It is difficult to say just what the honey crop is going to be at this particular time, as the cold wet rainy weather over the entire central part of the United States, weak colonies due to short stores and bad weather, neglect of bees by many who are having difficulties in other directions, make the situation seem discouraging. The writer, however, cannot help but remember the seasons of 1903 and 1916. Both of these years in Illinois resembled the present season very closely. However, the weather turned suddenly warm and there was a terrific flow from white Dutch clover over a vast area. The flow lasted almost until the first of August, and one of the heaviest crops of honey ever produced in this territory was produced in each of those two years. We are hoping that we may see a repetition of these seasons in 1943.

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All Grades.
SEND SAMPLES AND PRICES
Honey Sales Co., 1808 N. Washington Ave.
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• THE MARKET PLACE •

BEES AND QUEENS

CAUCASIANS after June 1st—2-Lb. pkg. \$2.80; 3-Lb. pkg. \$3.65. Untested queens 75 cents each. Lewis & Tillery Bee Co., Greenville, Alabama.

CAUCASIANS or CARNIOLANS after June 1st—2-Lb. pkg. \$2.80; 3-Lb. pkg. \$3.65. Untested queens 75 cents each; 100 or more, 65 cents each. Tillery Brothers, Greenville, Alabama.

NORTHERN BRED Italian queens eight dollars per dozen. Satisfaction guaranteed. Walter D. Leverette, Caro, Michigan.

CHOICE bright Italian queens, northern bred for gentleness and hustlers 75c each; dozen \$8.00. Emil W. Gutekunst, Colden, New York.

GOLDEN QUEENS—Excellent quality, gentle, productive; health certificate. Satisfaction guaranteed 90c. O. E. Brown, Rt. 1, Ashboro, North Carolina.

PACKAGE BEES AND QUEENS—Pure Italian. Prompt shipment, low prices and honest dealings, CRENSHAW COUNTY APIARIES, RUTLEDGE, ALA.

CAUCASIAN QUEENS in June 75c. Package bees now—2 lbs. \$2.80 and 3 lbs. \$3.65, with mated Caucasian queen. Deduct price of queen for queenless packages. Miller Bros. Rt. 1, Three Rivers, Texas.

HONEY FOR SALE

HONEY FOR SALE—We buy and sell all kinds, carloads and less. The John G. Paton Company, Inc. 630 Fifth Avenue, New York, N. Y.

HONEY FOR SALE—We buy and sell all kinds, any quantity. H. & S. Honey and Wax Company, Inc., 265-267 Greenwich St., New York.

WE BUY and sell any quantity, all varieties. B-Z-B Honey Company, Alhambra, California.

HONEY AND BEESWAX WANTED

PLEASE NOTE. While we use every precaution to list only reliable buyers in this department, we advise readers to sell honey for cash or C. O. D. unless they have thoroughly investigated the buyer as responsible on open account.

CASH FOR EXTRACTED HONEY. Bizzy Bee Ranch, North Abington, Massachusetts.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce Street, Los Angeles, California.

WANTED—White or light amber extracted honey from 1000 lbs. to carload. Cash waiting; send sample and best price to Honeymoon Products Co., 39 E. Henry St., River Rouge, Michigan.

HONEY WANTED—State kind, quality, amount. Ellsworth Meineke, Arlington Heights, Illinois.

WE PAY CASH for extracted clover honey Fair-Field Honey Company, Millersport, Ohio.

CASH FOR YOUR WAX the day received. Write for quotations and shipping tags. Walter T. Kelley Co., Paducah, Kentucky.

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department it should be so stated when advertisement is sent.

Rates of advertising in this classified department are eight cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers we require reference of all new advertisers. To save time, please send the name of your bank and other reference with your copy.

Advertisers offering used equipment or bees on combs must guarantee them free from disease or state exact condition, or furnish certificate of inspection from authorized inspectors. Conditions should be stated to insure that buyer is fully informed.

WANTED—Honey and Beeswax. Mail samples, state quantity and price. Bryant & Cookinham, Los Angeles, Calif.

ALL GRADES extracted honey wanted. Bee supplies and honey containers for sale. Prairie View Honey Co., 12243 12th Street, Detroit, Michigan.

TRUCKLOADS OR CARLOADS of honey wanted. Send sample and state prices. H. & G. Apiaries, 2111 Cashion Place, Oklahoma City, Oklahoma.

COMB HONEY WANTED. State size section, how packed and the quantity you have. Frank H. Hauck, P. O. Box 84, Kew Gardens, New York.

FOR SALE

DURING the present shortage of comb foundation use A. V. S. Wax Edged Wooden Starters. 50 starters for frames, \$1.00 postpaid. A. V. Small, Augusta, Kans.

FOR SALE—80 shallow 10 frame extracting supers with combs, disease free. \$1.00 each. C. F. Rife, Naperville, Illinois.

BEES—210 colonies, good complete 10 frame outfit for extracted honey. State inspected. Leland Farnsworth, Davison, Michigan.

FOR SALE—3 H. P. flue steam boiler, used 30 days. Price \$150.00. Gordon Bell, Badger, Minnesota.

ROOT REVERSIBLE 2 frame extractor. Alfred Stutt, Rt. 3, Creston, Iowa.

FOR SALE—Owing to circumstances, at a sacrifice price for cash, 90 colonies of bees and equipment. All in good shape. With proper care they will pay for themselves this season. Geo. H. Frey, Edinburg, Ill.

LEWIS BEE SUPPLIES, Dadant's Crimp Wired Foundation. Prompt shipment from large stock. Simeon B. Beiler, Authorized Distributor, Intercourse, Pa.

WANTED

FOUNDATION MILL. STATE PRICE; DESCRIBE. Don Jenkins, 352 W. 5 North, Salt Lake City.

WANTED—200 swarms of bees to operate on shares. Southeastern Minnesota. Roger Dillehay, Dover, Minnesota.

I WILL TAKE A PARTNER or sell my bee ranch. Chas. Watts, Coquille, Oregon.

POSITIONS AND HELP WANTED

WANTED by July 1st—Experienced beeman at \$100.00 per month, including room and board. State experience. John Kneser, Rt. 1, Hales Corners, Wisconsin.

WANTED—Experienced man in Queen, Package and Honey Production. Steady work all year. Give full particulars when replying. Al Winn, Rt. 1, Box 729A, Petaluma, Calif.

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COMB FOUNDATION at money-saving prices. Wax worked at lowest rates. Comb and cappings rendered. Robinson's Wax Works, Mayville, N. Y.

LARGE CASH SAVINGS can be made by letting us work your wax into either wired or plain foundation. Large independent factory manufacturing a complete line of bee supplies including extractors, etc. Selling direct saves you the agents profit. Quick shipment from large stock. Large free catalogue explains everything. Walter T. Kelley Co., Paducah, Kentucky.

FIVE POUNDS quality medium brood foundation postpaid for \$3.80. Fred Peterson, Alden, Iowa.

PINARD'S nailless queen cage. Agents—Diamond Match Co., Chico and Los Angeles, California; Weaver Apiaries, Navasota, Texas. Pinard manufacturer, 1794 Hicks Ave., San Jose, California.

WRITE FOR CATALOGUE. Quality bee supplies at factory store prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Bee Supplies, Onsted, Michigan.

FOR SALE—Our COMBINED CONTROLLABLE FEEDER and SWARM CONTROL BOARD when used right will save many a swarm. Has no metal to chill bees. Better made. \$1.75 postpaid for sample. 10 for \$15.00 not prepaid. Upon immediate receipt, if unsatisfactory, the purchase price refunded. Lewis-Dadant dealers NICOLLET COUNTY NURSERY, St. Peter, Minnesota.

PORTER BEE ESCAPES are fast, reliable, labor savers. R & E. C. Porter, Lewistown, Illinois.

MISCELLANEOUS

QUEENBEE PAINTING outfits \$1.00 postpaid. Southwick Apiarists, Waban, Mass.

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RANCH MAGAZINE—Do you find it difficult to secure information about sheep and sheep ranching methods? The SHEEP AND GOAT RAISER reaches more sheepmen with more information on range sheep than any magazine published. Subscription \$1.50. Hotel Cactus, San Angelo, Texas.

MISCELLANEOUS (Continued)

SUBSCRIBE for Honey Cookery News—bi-monthly 35 cents. 3414 S. Western Ave., Chicago, Illinois.

THE BEEKEEPERS MAGAZINE, published monthly, brings you the news from the field of beekeeping. Subscription: \$1 a year. Single copy of current issue, 10c. The Beekeepers Magazine, 3110 Piper Road, Lansing, Michigan.

THE BEE WORLD—The leading bee journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy, post free, 12 cents, stamps. Membership of the Club, including subscription to the paper 10/6. The Apia Club, The Way's End, Foxton Royston, Herts, England.

Middlesex County (Mass.)

Middlesex County Beekeepers Association will meet at 2 P. M. on the last Saturday of each month this summer. Each family will bring its own rations and hardware for the picnic suppers. The May gathering was held at Weston, Massachusetts. Our second field meeting will be on June 26 at the Walter M. Copeland bee headquarters, 30 Spring Street, Lexington, Massachusetts, where colored movies of bees and flowers will be shown. At all these summer meetings bee colonies are opened, inspected and discussed. All those who are interested in bees are welcome on these occasions. Other attractions will be detailed on the card notices mailed near the end of each month to the members, and in later issues of this journal. Please arrange to share and fill the available transportation.

A. M. Southwick, Pres.

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3-Lb. packages with queen	3.80
4-Lb. packages with queen	4.60
Queens via mail prepaid	.90

Citronelle Bee Co. :: Citronelle, Ala.

PACKAGE BEES—ITALIAN QUEENS

Light, 3-Banded Italians reared from queens tested for heavy honey producing. Long life, good winter resistant and gentle. Stock I have been breeding from since 1926 and have made me continuous good customers. Can also furnish queens reared from stock bred for resistance to disease.

To those who desire to make increase and failed to get bees or queens earlier I will, when ordering 5 or more queens, send instructions on how to make increase by dividing with slight or no reduction of honey yield.

Queens of either stock	\$.70
Bees, 2-Lb.	2.70
Bees, 3-Lb.	3.50
Per extra lb.	.75

HOMER W. RICHARD

Route 3, Box 252-1

El Dorado, Arkansas

Stock From Government, Bred for Resistant Queens

We might still have package bees at the following prices, get in touch with us for your supply of young select untested laying queens. No C. O. D.

Comblens. With Queen	2-Lb.	3-Lb.	4 Lb
1 to 24, each	\$2.90	\$3.65	\$4.40
25 to 49, each	2.75	3.50	4.25
50 or more, each	2.55	3.30	4.00

Queens each \$.90

Air mail \$.95

PLAUCHE BEE FARM

Hamburg, Louisiana

PIGEONS

If you are interested in Pigeons, you need the AMERICAN PIGEON JOURNAL, an informational instructive 32 page monthly magazine. Sample 15c; 12 months, \$1.50.

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Gives the latest news and views of the rabbit world—an illustrated monthly magazine of general and educational features. One year \$1.00; three years, \$2.00; sample 15c.

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Subscription \$1.00 per year, \$1.50 two years, \$2.00 three years. In combination with American Bee Journal \$1.60 per year.

Timely topics on western Canadian beekeeping and all the news about Canada and Canadian markets. You cannot afford to be without the most up-to-date information in these days of great changes. Sample copy free. Address WESTERN CANADA BEEKEEPER, Wallingford Building, Winnipeg, Manitoba, Canada.

JENSEN'S Package Bees and Queens

With honey commanding a good price, you can afford to use nothing but the best bees and queens you can obtain. "There is no substitute for Quality" This applies in bees and queens even more so than in other commodities in daily use. After comparative tests over a period of years, many of our customers insist on us supplying them with our queens. "Don't buy other queens for order, we want your queens only." The cream of the crop now being produced, maintaining full scale production; so prompt deliveries anticipated.

Prices		2-Lb. Pkgs. with queens	3-Lb. Pkgs. with queens
1- 24	Queens \$.80 each	\$2.85 each	\$3.75 each
25-100	.75 each	2.70 each	3.55 each
101 up	.70 each		

Booster packages: Deduct price of queen.

Jensen's Apiaries : Macon, Miss.

The Home of "Magnolia State" Strain Italians

PACKAGE BEES AND QUEENS

Gentle three band Italian stock that have stood the test for 20 years, and made me a host of friends. They will do as much for you. In addition to above strain, I will be able to produce a limited number of packages headed with daughters of queen bred for resistance to A. F. B.

As I have never had any disease in my bees I cannot attest to their resistance to A. F. B. but am breeding from daughters of queens bred for resistance. They are a bit harder to handle than Italians, but from a honey making standpoint I don't think they can be excelled.

No orders solicited before May 20th. After May 20th priced as follows:		Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1- 24		\$.75	\$2.80	\$3.65	\$4.45	\$5.20
25- 99		.70	2.65	3.45	4.20	4.90
100-499		.65	2.50	3.25	3.95	4.60
500-up		.60	2.35	3.05	3.70	4.30

A. E. SHAW, Shannon, Mississippi

Stock Bred For Resistance

Use this stock when it can be obtained to carry forward your Victory Campaign for disease control.

General requeening during the later part of the main honey flow has long been recognized as a standard practice. Make queens available at any time by the use of the nucleus method of queen reservoir and introduction.

IOWA BEEKEEPERS' ASSOCIATION

STATE HOUSE

DES MOINES, IOWA

FINE ITALIAN STOCK

2-Lb. package with queen \$2.95; 3-Lb., \$3.85

E. J. BORDELON APIARIES

Box 33, Moreauville, Louisiana

We are booked to capacity.
Please keep us in mind for 1944.

ALBERT KOEHNEN, Live Oak, Calif.

When Writing Advertisers, Please Tell Them You Read It in A-B-J.



Pettit's Summer Queens

Any number 80 cents each
U. S. money

In Canada \$1.00 each, Canadian
money (Pays exchange and
10% duty)

Write for particulars to

Morley Pettit

Tifton, Georgia, U. S. A.

Canadian Bee Journal

Canadian beekeepers too have wartime problems. If you are interested in bee activities "North of the Border," send us your subscription NOW. We will see that you receive each monthly copy regularly.

Each issue contains timely articles of value to beekeepers everywhere, and News and Views from Coast to Coast.

Subscription price, \$1.25 per year in
U. S. A.

CANADIAN BEE JOURNAL

OSHAWA.

ONTARIO

3-Banded Italian Bees and Queens

If you are in the market for package bees in 1943, and want the best for your money, then be wise and buy my three banded Italian bees. Write for prices.

J. P. CORONA Box 124 Kenner, La.

We will buy your white and amber extracted honey. Write us about our furnishing empty containers free . . .

THE FRED. W. MUTH CO.
Pearl and Walnut Cincinnati, Ohio

HONEY WANTED

COMB AND EXTRACTED

LAWRENCE FRUIT COMPANY

Commission Merchants

71 South Water Market, Chicago, Illinois
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Write now to The Editor, P. O. Box 20,
West Maitland, New South Wales, Australia

THRIFTY BEES

THREE-BANDED ITALIANS ONLY

Untested queens, 1 to 24, 75c ea.
25 to 99, 85c ea. 100 up, 80c ea.

We have some package bees for June delivery. Write for prices. Thrifty bees are guaranteed to please.

W. J. FOREHAND & SONS

Fort Deposit, Alabama
Breeders Since 1892

ANDERSONS QUALITY QUEENS

ALSO PACKAGE BEES

Selected untested queens, each \$.70
2-Lb. Bees with queen 2.65
3-Lb. Bees with queen 3.45

We cannot handle orders for additional queens until June 10th. You'll like our bees and queens.

B. A. Anderson & Co.

OPP, ALABAMA

HELLO FOLKS!

HERE WE ARE AGAIN STEVENSON'S LINE-BRED GOLDENS

By the time you see this, there won't be many of us left. If you want us better order promptly.

2-Lb. \$2.95—3-Lb. \$3.80—Queens 90c

STEVENSON'S APIARIES Westwego, Louisiana

CAREFULLY PRODUCED THREE-BANDED

ITALIAN QUEENS 75 CENTS EACH

Write for price on 100 or more

JOHN C. HOGG

TIFTON, GEORGIA

MOORE'S STRAIN

Away back in 1879, I commenced rearing Italian queens with the object of improvement constantly in view. By careful selection during all these years, I have succeeded in producing a strain of three-banded, leather-colored Italian bees, known as Moore's Strain of Italians, which has won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Send for descriptive circular and read reports from those who have tried them. Untested queens \$1.00 each; 6 for \$5.00; 12 or more 75 Cents each.

J. P. MOORE, JR., Falmouth, Ky.

Former address, Morgan, Kentucky
Safe arrival and satisfaction guaranteed



Bee Smokers and Bee Veils

By diverting material allowances to these two indispensable items early in the season, we have been able to supply them in normal quantities.

On March 6th, the WPB authorized increased production on Extractors and some other metal bee supplies, from 38% to 100%, as of 1940-41. At this late date, with the difficulty in securing materials and the labor shortage, the situation will not be much improved, in time for the 1943 crop.

The bulk of all bee supplies are bought and honey gathered during the first six months of the year. Even under normal conditions, the manufacturer must plan his production from six to ten months in advance of the active season.

A. G. WOODMAN CO., Grand Rapids, Michigan

Queens-Italians-Caucasians

90 cents each—100 for \$75.00

AS GOOD AS MONEY CAN BUY

WEAVER APIARIES, Navasota, Texas

Queens ITALIAN STOCK Packages

Some package bees available for June. Queen production will be maintained with a quality to please the most discriminating. Compare them with any on the market. No change in prices for June. Refer to previous ads.

BESSONET BEE COMPANY, Donaldsonville, La.

*We want to thank our good friends
and customers for the business given us this year*

We were booked to capacity to May 20th before the shipping season started. We can now accept orders for shipment after June 1st only. We want to again urge you to let us have your order early to secure the shipping date you desire.

Three-Banded Italian Bees & Queens

PRICES

Quantity	Queens	2-Lb. pkg. with queen	3-Lb. pkg. with queen	4-Lb. pkg. with queen
1 to 24	.....\$ .75	\$2.80	\$3.70	\$4.45
25 to 99	..... .70	2.65	3.50	4.20
100 to 499	..... .65	2.50	3.30	3.95

BEST YOUNG QUEENS

SAFE ARRIVAL

ALL NEW CAGES

HOLDER APIARIES

65 ST. FRANCIS ST.

BOX 1101

MOBILE, ALABAMA

THE POSTSCRIPT

After trial of many kinds of hive stands I like best a sheet of tar paper about three feet square. This is cheap, easy to obtain and lasts two or three years. We usually use double thickness to avoid cracking and to make sure it will lie flat on the ground. Such a stand keeps down weeds and grass from the entrance and provides a clear space for falling bees to reach the hive.

— V —

During the great epidemic of influenza in 1890 some doctors advised honey and lemon juice as a remedy. The juice of one lemon was added to a cup of honey and two teaspoonfuls given as a dose whenever necessary. It was advised to give it as hot as the patient could comfortably stand. Beekeepers might try this remedy when they have that gripe feeling.

— V —

There has been much interest in the Zofka red clover planted in our test plots in 1937. This is a strain, developed after many years of effort, having a short corolla tube which enables the bees to reach the nectar. For a time the plant did well with us but it appears to be poorly adapted to our rigorous midwest climate. Once before we had serious winter killing but during the past winter it killed out entirely and after six years we are back where we started. However, we have been able to send seed produced in Iowa to several plant breeders who are working with red clover and they have tried crossing it with strains already acclimated here.

— V —

We now have another somewhat similar clover from high fields of the Caucasian region of Russia and Roumania which came through the winter without injury. It is a perennial and looks promising at this stage. We must remember, however, that it takes several years to determine the value of any new plant and this may yet prove to be only another disappointment.

— V —

The winter of 1942-43 was a really tough one in this region. Reports from many localities indicate heavy losses of bees, as well as winter killing of alfalfa, clovers and perennial garden plants. Our test gardens suffered severely and dozens of plots were lost completely. Most of the herbs made famous by our grandmothers are gone. Of the twenty species of lespedeza under test few remain and many ornamentals were lost as well.

— V —

In the apiary the bees were prepared for winter with a variety of entrances. Of those wintered with the usual opening at the bottom of the hive, fifty per cent or more were lost. Ten colonies with middle entrances all came through and most of those with upper entrances wintered successfully. At the suggestion of Glenn Jones, six colonies were given upper entrances at the side of the hive instead of the end. All six of these came through and they appear to be among the best colonies in the yard. It may well be that there may be some merit in an entrance at the side of the hive instead of the end. We certainly feel inclined to give it further trial.

— V —

J. Skovbo, of Hermiston, Oregon, first called my attention to *Robinia semperflorens*, a variety of black locust which has proved valuable to the beemen of northeastern Germany. The common black locust has long been known as a source of honey in this country but the blooming period is so short that the crop is seldom large. According to L. H. Bailey this variety to which Skovbo refers blooms throughout the year and that would be a big advantage. A grove of locust that would provide bee pasture all summer might prove very valuable to the beekeeper. Who knows where seed or trees can be obtained?

Among the honeys which are slow to granulate should be included snowberry. Leslie H. Walling, of Hall, Montana, reports that a sample of honey from this source gathered in June 1941 was still liquid in March, 1943. Since the honey is light in color and of good flavor snowberry should be of special interest to packers for blending with others to retard granulation on the grocer's shelves.

— V —

Mention of Kudzu in the April Postscript brings a note from Alfred G. Johnson, of Greensboro, Alabama, to the effect that he is located in a region where it is grown on a large scale. He says that it is a good hay crop and soil improver but that it is a shy bloomer and as a honey plant is no good in his neighborhood. It is unfortunate for the beekeeper that so many of the new plants coming into use are of little use to the bees. In Iowa and Illinois the soybean is planted in immense acreage but the beekeeper finds little profit from its presence. So it is with lespedeza in other states.

— V —

An interesting account of England in wartime comes in a letter from Miss Barbara Elliott, of Oxted, Surrey. Much as we complain of restrictions here, ours are mild compared with that country. Flowers can no longer be sent by post nor carried in the hand when traveling by rail. Only five pounds of sugar can be had for feeding each colony of bees. Shipping is conserved by small boys on bicycles who work in relays and carry packages to be handed on from one to another. Miss Elliott fears that many of the wonderful private gardens will disappear because of war necessities and never be replaced on the former scale. England has long been famous for her gardens.

— V —

There are 296 species of wild bees known to be native to Illinois. It is the great number of wild bees of different kinds that serve the need for pollination in most localities. When large areas are devoted to intensive cultivation of one crop it often happens that the wild bee population is insufficient to serve the purpose and large numbers of honeybees must be brought in to insure full crops of fruit or seeds. These wild bees range in size from small insects less than half as large as a house fly to the big bumblebees familiar to all. It is probable that the honeybee is able to pollinate a larger variety of plants than any other species.

— V —

Bird's-foot trefoil has done so well in our test plots for four years that we are convinced it will find a permanent place in midwestern agriculture. It does well seeded with timothy or other grasses but is not suited for use in a pure stand. It appears to be resistant to drought and to winter injury. George H. Rea reports it as yielding surplus honey in Albany County, New York, and regards the quality as high. Thus we find encouragement in the expectation that its coming will improve the bee pasture where it is grown.

— V —

Interest in the honey plant test garden has been manifested from the most unexpected places. The director of an old world botanical garden, the editor of an international botanical magazine and the program director of a radio station are typical of those making inquiry as to the progress of investigation of honey plants. Leaders in the field of agriculture are at last coming to recognize the importance of the honeybee in the pollination of flowers and the resulting crops. They are also coming to see that the beeman must prosper if we are to have a prosperous agriculture. Without prosperity among the farmers we cannot have a prosperous industry or a prosperous country. Thus the bee assumes a key position in our nation's activity.

FRANK C. PELLETT.

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Save Worry!

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Can be nailed into Lewis Slotted Bottombar
Frames in a jiffy. And such wonderful
combs you'll be proud of 'em.

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PRODUCTION

is the watch-word. This business will help. We will
do so by stocking needed supplies in advance as they
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We cannot obtain all items but will approach a
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Do you need hives, supers, frames, sections, hive
parts, and foundation? Write us about your needs.
Try us on your list of things wanted. We will do
the best possible with it.

We want honey and beeswax. Will be glad to
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We are manufacturers of beekeepers
supplies and can promptly furnish every-
thing a beekeeper needs; SECTIONS,
HIVES, FRAMES, SUPERS, etc.

The manufacturing of one piece sec-
tions is still one of our specialties upon
which we pride ourselves. We use only
the choicest SECOND GROWTH WIS-
CONSIN basswood in the manufacture
of our sections, and all are perfect in
finish and workmanship.

Due to war conditions we did not print a
catalogue for 1943. Please use your 1942 cata-
logue for prices or send a LIST of items you
will need and we will gladly quote prices.

MARSHFIELD MFG. CO.
MARSHFIELD, WISCONSIN

**Package
Bees and
Queens**

Order our Italian Bees and Queens and
get the best. Prices for young laying queen
and package bees with queen as follows:

Quantity	Queens	2-Lb.	3-Lb.	4-Lb.	5-Lb.
1 to 20	\$.75	\$2.95	\$3.80	\$4.60	\$5.35
21 to 49	.70	2.75	3.55	4.30	5.00
50 to 100	.65	2.60	3.35	4.05	4.70
100 up	.60	2.50	3.20	3.85	4.45

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Strong, Prolific Colonies

DO NOT JUST HAPPEN

They are the result of years of research and study. There must be a maximum number of worker bees. This condition exists only when brood combs of worker cells are used,—and such combs cannot be produced from ordinary foundation.

In 1923 ROOTS gave the beekeeping world the first non-sagging, non-warping foundation, THREE-PLY AIRCO FOUNDATION. The popularity of this foundation has grown from year to year. Today it is a leader.

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